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Textile World

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New Personnel—New Equipment —A New Industry

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TO THOSE who know the story of southern reconstruction of the last half-century, each successive Southern Textile Exposition is another act in a drama of courage.

The 1930 instalment, portrayed at Greenville this week, had none of the anti-climactic features one might reasonably expect in a section which has progressed so fast and so far toward accomplishment. The actors showed no inclination to play a last act; to enter a "lived happily ever afterward" stage.

Instead, the ninth exposition had all the ingredients of a new drama in the making: new personnel, new equipment, a new industry.

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The new equipment was demonstrated visually at the exposition itself—just as it was at the Boston and Philadelphia shows last spring. Any lingering doubts of the new era of machinery development into which the textile industry has slipped, almost unawares, were dispelled this week.

The new personnel was also demonstrated—let us say, psychically. This does not mean that there was a new cast; it was largely the old cast in a new state of mind.

It was that change which George Harris had in mind when he addressed the Southern Textile Association on Friday. He recalled the early days of the organization; the "reluctance of members in speaking out during discussions"; the "elementary character of the subjects discussed." From those days of struggle, he said, the members have progressed until today they "are accomplishing results in the mill that must be credited directly to their concerted effort."

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But Mr. Harris did not dwell long upon this factor of accomplishment. He looked ahead into the period of reconstruction which the industry has already entered. He visualized a new industry, which will little resemble the one we know today. He touched upon the following steps in that reconstruction:

1. Consolidation of stronger units and merchandising houses into units put together according to their fitness for handling production by groups; and also the complete elimination of the weaker organizations.

2. A change in our national laws which, although originally devised to protect open competition, now prevent proper cooperation.

3. Correction of the fundamental weaknesses which have been due to de-centralization.

4. Reduction of costs in ways other than by increasing production.

5. Industry-wide adoption of the proposal to eliminate night employment of women and minors.

6. A wage scale high enough to prevent suffering when lay-offs are necessary; but, at the same time, a low cost per pound, which means less labor per unit of output.

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Even though, as we have stated, no final curtain was rung down on a "lived happily ever afterward" scene, and even though this week's act of the textile drama closed on a note of suspense, there was promise of fuller success as the reward for the hard work still to be done. "Do not be discouraged," said Mr. Harris. "We have several years of the reconstruction period ahead. Cotton manufacturing will be carrying on when we are under the sod. Let's do our best while we have it temporarily under our care."

He was not speaking to the South as a section, nor to any one branch of textile manufacture as a group. He was addressing the entire industry when he said: "Our competitors are our associates and we can never get ahead by destroying others."

The Week in Textiles

"Buy Now" Campaign . . .

THE "BUY NOW" campaign launched last Monday by the retail merchants committee of the Philadelphia Chamber of Commerce and backed by important organizations of consumers, has spread to many sections and is rapidly becoming national in scope. . . . . The objective is of course to put more money in circulation, stimulate retail trade, move more business into manufacturers' hands and reduce unemployment. P. H. Gadsden, president of the chamber, points out that "with prices lower than at any time since 1913, the consumer will not only be helping himself, but will be performing a great service in restoring normal conditions." . . . . Many merchants are cooperating in the campaign and there is much optimism that tangible results will be reaped.

Indorse Night Work Plan . . .

AT MEETING of 75 mill executives from Carolinas and Georgia at Greenville Wednesday, held for exchange of views on current business conditions, those attending were practically unanimous in indorsing soundness of The Cotton-Textile Institute's recommendation that night employment of women and minors be discontinued. . . . . S. Marshall Beattie and T. M. Marchant presided. It developed that the print cloth and narrow sheetings mills, with very few exceptions, have already discontinued night operations. It was clearly evident that mills in these groups intend to continue practice of balancing production with demand. . . . . George A. Sloan, president of the institute, who attended the meeting as a guest of the mill executives, express the opinion that the cotton textile industry should be regarded essentially as a day-operating industry.

The Business Outlook

"Undismayed by the indecision of business leadership, financial conservatism, and the confusion of political cross-currents here and abroad, the fundamental though blind forces of human needs are again slowly laying the basis for future recovery. The mass of final buyers are more keenly alive to bargain values offered by energetic merchandisers than are manufacturers who are offered the lowest raw material prices in many years. Consumption eats steadily into supplies as industrial production lags. . . . Despite political uncertainties abroad, foreign users of American cotton recognize that this basic material is cheap and, with praiseworthy assistance from American financial sources, are buying it abundantly. Though, as the decline in our index this week from 87.1% of normal to 84.7% suggests, the general measures of gradual improvement are wavering and confused, many favorable factors are to be seen beneath the surface." —*The Business Week*

The Textile Outlook

Statistical soundness of the cotton goods position is being demonstrated by the firmness of the present market, and action based on the lessons of adversity will doubtless work for the benefit of this industry in the future. Many cottons have been more active lately and advances in price are being recorded. Sellers generally are encouragingly independent. . . . Wool goods gained a shade this week with advent of colder weather. Fundamental betterment must await development of spring trade and further evidence that wool prices can be maintained. . . . The knit goods outlook has improved. Some underwear mills are oversold on fall goods and spring trade is opening up. Hosiery is moving for nearby but price uncertainty hampers broad demand. . . . Although raw silk is a bit firmer, manufacturers still look confident as they have experienced other points in recent months which they considered bottom only to have basis recede further. Silk fabrics however are moving in a broader way.

Plan Future of Wool Institute . . .

PLANS FOR the operation of the Wool Institute after the resignation of A. D. Whiteside as president becomes effective on Jan. 1 were discussed on Wednesday at a meeting of the board of directors at the offices of the institute in New York. . . . . A committee of directors will develop plans for the continuance of the institute and present them at a meeting of the board which will be held in about two weeks. A. D. Whiteside presided at Wednesday's meeting.

Wool Fabric Stocks Reduced . . .

IN BOTH men's wear and women's wear divisions surplus stocks on hand are now less than 30 days' supply based on current billings, according to the Wool Institute, Inc. This authority finds as result of reports from 91% of member looms that, while total production for September shows a 10% drop from August, billings exceeded production by 27.5%. Popularity of worsteds and woolens for dress goods is shown in an increase of 11.3% in billings in September over previous month.

Denim Firm Helps Employes . . .

AN INTERESTING step was taken by the Cone Export & Commission Co., when production of 36-in. denims was discontinued for the present and production concentrated on 28-in. . . . . This was done to give their employees one day a week more work, and at same time not increase the production in square yards.

Tariff Has Helped . . .

IN A RECENT issue of TEXTILE WORLD the import department of a large woolen concern advertised that it desired to get in touch with American manufacturers able to produce staple and low grade woolens with cotton warp, heretofore imported in large quantities but now impossible because of the new tariff rates on such fabrics. . . . . Maybe the tariff has helped after all.

Metric Conversion . . .

LEGISLATION WILL be proposed at the forthcoming session of Congress looking to the rationalization of the conversion factor between American and metric units of weights and measures. The new proposal is to facilitate the conversion of American units to metric units by providing special conversion factors for each set of industries in which the units are employed. . . . . For example, in the textile industry the need usually is to convert the yard to the meter and the proposal is to legalize a meter as 40 in. for this purpose. Under present conditions a legal conversion must use 39.370113 as the conversion factor. For some manufacturing industries it is proposed to legalize 25.4 millimeters as a conversion factor in dealing with inches. In another field the new proposal is to legalize 0.001 in. as 0.025 millimeters. . . . . To some this plan seems further to complicate the situation in that three new systems are set up, none of which is the true metric system.

Cotton in Lieu of Cash . . .

AN OFFER to accept a 500-pound bale of cotton as a $75 payment on automobile purchases has been made at Memphis, Tenn., by J. A. Humphreys, a Memphis automobile dealer. He says the offer was made on his own initiative and indicates no change of policy by any manufacturer. . . . . "We believe cotton prices are going up and will give us a chance to break even on the trades," Humphreys said.

Army Salvages Its Felt . . .

PAGE THE new uses committee! A novel means of utilizing a waste textile material has been discovered by the Quartermaster Corps. . . . . From the scraps of felt left over from the manufacture of Army saddles, a substantial and long-lived door mat is made. The mat is flexibly bound with steel strips. Similar mats for bathroom use may be made.

Statistics on Quality of Cotton Consumed

MARKET analysis is not a theorist's plaything. It is a practical and necessary tool of modern business. Under present-day conditions, it is difficult, if not impossible, to compete successfully without accurate statistical information on production and demand.

It was this necessity which impelled the cotton manufacturing industry to develop facts regarding current output of individual types of fabrics, and regarding current demand. It was the same necessity which impelled the U. S. Department of Agriculture, through its Division of Cotton Marketing, to develop statistics on grades and staple lengths both of the cotton crop and the carry-over, and of American mill consumption. Neither set of facts is effective without the other.

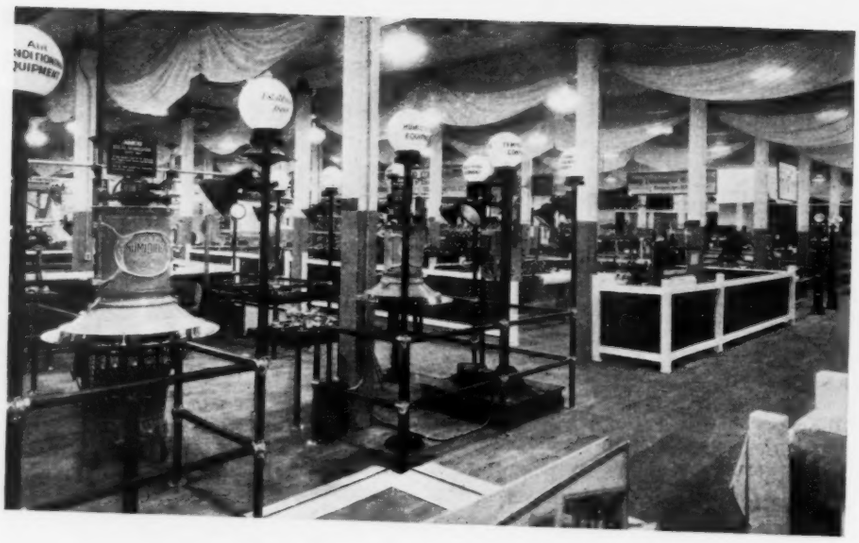
From the standpoint of the spinner, mills which know what kind of cotton they use, according to Government standards, can tell what the available supply is from the carry-over and incoming crop figures. By using the mill consumption figures of the previous year as a guide, they can estimate how much competition they may expect to have in buying to meet their next year's requirements. From the standpoint of the farmer, it is only through such statistical information that he can approach intelligently the planting of his crop, and avert later market demoralization which hurts not only the grower but the user.

It would seem almost superfluous to emphasize the importance of an orderly and economically sound "flow" of cotton to cotton goods, from the farmer through to the ultimate consumer. The industry must be regarded in this way, and not as a series of unconnected units. No one group can prosper without the others.

At the present time, the textile industry is changing more rapidly than ever before. As modifications in machinery and products develop, with corresponding change in raw material requirements, it is necessary to convey that information back to the farmer as quickly as possible. If he has not the facts regarding the types of cotton being consumed, he is unable to produce in line with those requirements—and consequently there results an interruption of the orderly "flow," with disastrous effect not only upon the grower, but upon the spinner, weaver, distributor and consumer.

Data on the quality of the crop and the carry-over are still furnished regularly by the department. Information on the quality of cotton consumed has not been released since the report for the year ending July 31, 1928, was published in June, 1929. In order that the statistical picture may be complete, it would seem absolutely advisable, in the interests of both growers and spinners, that the data on the latter phase be brought up to date for the crop years ending July 31, 1929 and July 31, 1930. The expense involved would be negligible compared with the benefits to be derived.

Southern Textile Exposition *Manifests* Noteworthy Machinery



THE first two textile expositions of the year, held respectively at Boston and Philadelphia, indicated that the year 1930 would be an outstanding one of improvement in mill equipment. And now the ninth Southern Textile Exposition, held in Textile Hall, Greenville, S. C., Oct. 20-25, proves that early predictions were exceedingly well founded. This year the textile industry is experiencing the greatest amount of development and improvement in its equipment observed in many decades.

The exposition attracted a large number of visitors to Greenville from every section of the industrial South. The number of exhibits—totaling more than 200—was greater than at Boston, although the average size of individual exhibits was less. The old and new equipment displayed by each concern was described briefly in the Oct. 18 issue of TEXTILE WORLD. In this issue a more detailed description is given of the new developments which have made their appearance in 1930. Many of these improvements which have not already been described in our New Machinery and Processes Section will be so treated at a later date.

The exposition was opened officially at 10 o'clock Monday morning with an appropriate ceremony directed by Major G. Heyward Mahon, Jr., of Greenville. Following the invocation, the officers and directors of Textile Hall Corp., headed by W. G. Sirrine, president, were introduced. An address of welcome to the city was delivered by Hon. A. C. Mann, mayor of Greenville, who was followed on the program by Hon. Ibra C. Blackwood, governor-elect of South Carolina. L. E. Wooten, vice-president, Lestershire Spool & Mfg. Co., Charlotte, N. C., responded in behalf of exhibitors at the show.

Preparatory Equipment

ONE of the more recent developments in picking machinery exhibited was the Ramsdell automatic self-doffing calender attached to a new single beater finisher lapper and shown by the H. & B. American Machine Co. This device automatically removes the completed picker lap and inserts a new lap roll in the calender, the machine can run continuously without stops for doffing, thus effecting a saving in labor together with an increase in production. Other advantages include the elimination of bad piecings, no piling up of cotton on the cages, and a fixed yardage and weight for every lap. This automatic self-doffing calender is designed to facilitate its application to all existing H. & B. pickers.

Improvements in the Breton Minerol process for oiling raw stock were exhibited on a working model by Borne Scrysmer Co., featuring the automatic pumping device and applying the oil both in the vertical opener and the conveyor pipe. Among the new products developed by this company is a dripless machine lubricant that does not require heat to melt and does not increase the starting torque, known as Brilliant Oil AX.

Although none of the machinery builders exhibited cards this year in Greenville, there were several displays of improved attachments and card clothing. Platt's Metallic Card Clothing Co. featured a special wire covering for feed rolls which prevents the licker-in from jerking laps and causing uneven feeding. This company also exhibited a mechanical stop motion of French manufacture that may be attached to any card. The device is arranged so that sliver passes over a trumpet before going into the roving can and, if the weight of sliver drops below pre-determined limits, the trumpet will be released and the card stops.

On display in the Hyatt Roller Bearing Co. exhibit was a card stripper roll made by the Saco-Lowell Shops and equipped with roller bearings. Howard Bros. Mfg. Co. featured a special patented foundation for cylinder and doffer fillets and possessing a flexible fabric construction designed to minimize the possibility of shelling out.

The U. S. Bobbin & Shuttle Co. featured an inside metal shield on card-room bobbins, giving protection where needed and avoiding splitting of the bobbin. This item is so designed that the operative can handle it with less chance of injury to his hands. A new finish known as U. S. Hard Wear finish was also featured.

As in the case of carding and combing machinery, none of the builders exhibited roving frames at the Greenville show. Perhaps the most interesting development in the

The two adjacent views show exhibits on the main floor of Textile Hall, Greenville, during Southern Textile Exposition this week. On the left is the view looking from the rear of the building and on the right is the view taken from the entrance

Development in 1930

roving processes featured this year was the application of long drafting to these frames as undertaken by Washburn. This new arrangement, briefly, is this: The roller stand is tilted at an angle of about 25%; the middle roll is removed and replaced by the lighter Washburn roll which runs unweighted and almost flush against the front roll. Driving gears are changed to suit the mechanism. It was said that no resetting of rolls is necessary when changing from one length staple to another. The only setting is as close as stands and cap bars will permit, thus controlling shorter fibers and producing a more even yarn with less ends down per hour. This system makes possible the elimination of the second intermediate process on fine numbers and the jack frame on coarse numbers.

The Southeastern Machine Co. featured a new method of plating fliers with a modified chromium-steel, known as "Andrews" plate. The Dixie Spindle & Flyer Co. exhibited the new Guillet interchangeable roller neck which is threaded on each end and screws into the rolls, thus eliminating the lost motion resulting from worn square neck rolls. The new Guillet neck is made of Max-el No. 2 steel. New individual-type automatic cleaners and distributors for slubbers, intermediate, and fine roving frames were exhibited by Firth-Smith Co.

Spinning Machinery

AMONG the most interesting machines exhibited was the new 1930 Model ring-spinning frame shown by H. & B. American Machine Co. This machine is provided with an unusually heavy framing, extra wide faced gears and ample bearing surfaces to give increased stability at high speeds. Among the new improvements incorporated into this frame are ring rails in sections with adjustable lifting rods, thus eliminating the possibility of sagging ring rails; cylinder bearing oiled from spindle rail; new type cap bars which make cleaning of rolls easier; roving traverse motion provided for each side of frame with double and worm gear; panel at end of frame to prevent fly from motor getting into tape drive mechanism; new tape-drive arrangement designed to maintain constant tension; and spindle rails adjustable to fix accurately the distance between thread guides and the top of bobbin.

One of the regular H. & B. spinning frames was exhibited at the show fitted with the high-draft system which does not employ belts in the spinning process. There are four rolls, the second roll being only $\frac{5}{8}$ in. in diameter. All top rolls are of polished metal except the front roll which is covered with calfskin. There are two revolving top clearer and one revolving under clearer which keeps the second and third bottom rolls clean. The machine was shown spinning 26s yarn with front roller speed of 123.7 r.p.m., from 2.80 hank roving (double), spindle speed of 9,400 r.p.m., and drafting 18.57. The frame was equipped with $1\frac{3}{4}$ in. ring, $3\frac{1}{4}$ in. gauge and 7-in. traverse. The H. & B. high-draft system is featured by its simplicity of design and is easily operated by spinners who are only familiar with ordinary spinning.

The Casablancas long-draft system was exhibited by Whitin Machine Works running on 30s warp yarn. Spacing between the middle and back rollers has been increased from $1\frac{1}{4}$ in. to $1\frac{7}{8}$ in., so that a higher break draft may be obtained for opening up the roving to allow more even drafting between the aprons and front rollers. The leather aprons are now made wider in order that a full roving traverse may be used. For the purpose of making a performance comparison, one side of the frame was spinning 30s warp yarn from three-hank double roving, with draft of 20, whereas the other side, equipped with the Casablancas long-draft system, was spinning 30s warp yarn from 1.60 hank roving single in the creel, with draft of 18.75. In both cases the front roller speed was 140 r.p.m. It was pointed out that a varying range of counts can be spun from a single hank of roving, a feature that is of particular advantage to yarn mills handling many small orders on different counts.

The Belger Co. exhibited a ring-spinning frame equipped with the "Elastix" rolls and drafting 18.40 with 1.33 hank roving (single). The Hyatt Roller Bearing Co. displayed a model of a spinning-frame cylinder equipped with roller bearings. The "Industrial" automatic coupling unit and speed accelerator, especially adaptable for spinning-frame drives, was shown by Wat-

son-Williams Mfg. Co. Upon starting, the motor is free to attain its full speed in its normal time, and subsequently the motor sets an auxiliary actuator in motion which closes the play between two disks, and by slight friction, a cam carrier is motivated causing it to accelerate into the eventual speed of the coupling. Reduction of starting torque is one of the principal advantages of this unit.

As a feature of its exhibit the U. S. Ring Traveler Co. showed a new traveler with a beveled edge on the inside that prevents flattening of the thread and runs with less grease on twisters, and at lower temperature on spinning. This company also exhibited a new high-speed concave ring for twisters which is intended to provide better lubrication of traveler with less grease. SKF Industries, Inc., featured a bobbin-testing machine manufactured by the Fales & Jenks Machine Co., which will enable a mill to test new and worn bobbins to determine if they can be used without causing vibration of the spindle.

A self-lubricated twister ring with an interior spiral groove and wick extending entirely around the ring was shown by the Whitinsville Spinning Ring Co., who are American agents for the manufacturer of this ring, Eadie Bros. of Scotland. Another item featured by this concern is a curved web spinning ring that greatly reduces wear on the outside of the traveler as well as on the ring.

W. G. Sirrine, president of Textile Hall Corp., Greenville.

Draper Corp. exhibited the new Stimpson centrifugal clutch spindle which was designed to overcome the need for repairs and to eliminate any vibration of the spindle due to eccentricity. The tension spring holding the segments in position and controlling the pressure upon the bobbin is securely fastened and made of special wire that will not break. There is no wear upon the blade by the segments because the action is rolling rather than sliding.

Among the new devices shown in operation was a creel-board cleaner made by Eclipse Textile Devices, Inc., and adapted for any type of spinning frame equipped with Eclipse bobbin holders. This cleaning device is driven from the spinning frame drum by means of a band and moves around small pulleys at each end of the creel board. Advantages of the creel board cleaner are that it requires no care, eliminates slubs in the yarn and economizes on labor and time.

A. C. Lawrence Leather Co. exhibited a new calfskin for roller covering known as the Aclobrand calf which is intended for spinning where increased spindle speeds, larger rings, and longer drafts are employed.

The Atwood 5-B spinner is now equipped with a new vertical special motor drive and has new gear guard, thus making parts easily accessible for gear changing, oiling, and greasing. A long traverse take-up bobbin has been devised which increases capacity of the bobbin practically 15%. The machine was also equipped with a novel method of weighting belt take-up in order to compensate for the variation in short and long frames.

"Monarch" double-deck twister was shown by Atwood Machine Co. Among the features of this machine are: single vertical high speed motor drive; belts may be replaced endless; novel automatic belt tension device which also drives take-up mechanism, gear guards easily removable for greasing and oiling, positive cam motion operating traverse bars through sliding rod connection, angle iron guide girts adjustable in the vertical plane, lower deck spindles spaced wider across the frame than those of upper deck, distances from delivery bobbin and take-up bobbin and the angle of thread travel is the same on both decks, thus insuring even tension. This machine is especially adapted to tram, grenadine, and crepe.

The new Atwood "Advance" redraw frame which incorporates all the oilless features of the Stonington winder was exhibited. Delivery spindles are equipped with springs absorbing vibration of the bobbin which runs either at right angles or parallel to the frame.

Fletcher Works exhibited the new model 30 double-deck twister, operating on grenadine twist silk, and which has several distinct features including the following: automatic belt take-up which maintains a constant belt tension and requires a minimum amount of power, slip starter that protects motor from burning out and relieves undue and sudden strains on belting, a whorl latch which simplifies lubrication; change gears for regulating twist are cleverly proportioned so that the number of teeth in the change gear will produce that same number of turns per inch in the yarn; equipped with adjustable thread guides. Seal-packed ball bearings on the vertical back shaft, individual spindle adjustment, independent operation of decks on the double-deck model, and balanced idler pulley with large oil reservoir were among other improvements observed.

The duplex doubler twister which was exhibited by the Fletcher Works may be equipped to specifications with either steel grooved feed rolls or with cast iron feed rolls set at an angle to each other, thus keeping the threads separated by approximately $\frac{1}{4}$ in. and eliminating the possibility of tangling.

One of the most recent developments shown was the "Oilwell" spindle for silk and rayon twisters shown by Fletcher Works. This spindle has a larger oil reservoir and a system of circulating oil through the entire length of the bearing. It has an improved blade, proportioned to the bearings so as to permit a higher spindle speed without increased power, and a new bolster and sleeve. Uniform contact between belt and whorl is provided by having the spindle swings individually adjustable.

Winding and Warping Equipment

ABBOTT Machine Co. showed one of its circulating winders running twelve hours per day at full production, and featuring conical packages for magazine creels and large tubular package for twisting. This concern recently introduced a new head producing a shapely tapered cone of special wind for use in over-end creeling of fine yarn and for knitting machines. In conjunction with its winding machinery, this company is introducing a new creel of the single-end type which offers advantages over the magazine type, particularly on

fine yarns, as to labor cost, breakage and evenness of tension, while requiring less floor space.

The new Stonington winder with oilless bearings, gears, fingers and swift hangers, was shown by The Atwood Machine Co. This winder is equipped with a unit assembly on the cross head and with belt tension adjustment on motor drive for various speeds. It is easily adjusted for bobbin traverse and a special gearing arrangement is provided to obtain a ridgeless, uniform bobbin. There are patented adjustable wire swifts for both silk and rayon.

Foster Machine Co. exhibited its new Model 102 high-speed surface-driven or open-wind cone winder operated in conjunction with a Draper high-speed warper. The outstanding feature of the new winder is its high winding speed, making it especially adapted for cone warping. Also in operation at this company's exhibit was a Model 75 precise-wind machine, winding silk and rayon on cones, and another machine of the same model winding cotton thread yarn. The winder on silk and rayon was equipped with an improved attachment for moistening or conditioning the yarn. This device, which is also suitable for applying an oil emulsion or tinting fluid, consists of an emulsion tank, or non-corrosive metal trough, containing a roller of similar material, in which the fluid is maintained at a constant level by means of a glass feed-reservoir.

On the second floor at the Southern Textile Exposition, showing balcony ***in a view*** *toward the stage*

Creating an unusual amount of interest was the new No. 40 Whirlwind cone winder exhibited by the Universal Winding Co. This machine has eliminated the usual cams and reciprocating guide mechanism and has introduced a method of guiding the yarn by means of carefully arranged grooves in the driving drums. Although the machine was shown operating at the rate of 750 yd. per minute, the structure of the winder is such that even higher speeds may be obtained without damage to the yarn. This arrangement eliminates cutting of the drum by the yarn, and the absence of porcelain guides removes another possibility of wear. The machine is equipped with a conveyor and escalator attachment.

Also exhibited by Universal was an entirely new machine, known as Model No. 45, for winding a package 10 in. in length. This winder is of particular advantage in winding cotton-carpet warp yarn both for economy in shipping and for use in the carpet mill. The package contains 18 or 20 lb. of cord or twine. Latest improved machines for handling rayon, either for weaving or knitting, were demonstrated.

Sipp-Eastwood Corp. showed its latest-type double-deck winder with oilless spindle and shaft bearings and also equipped with separate drive shafting and pulleys for upper and lower deck spindles. This concern also makes a single-deck winder of similar construction. The Oswald Lever Co. exhibited specimen packages of yarn wound on its new No. 20 cop and bobbin winder. An automatic spooler was exhibited by Barber-Colman Co., and although no important changes have been made in the design of this machine, a few minor improvements were indicated.

High-speed rayon beam warping from cone creels was demonstrated by the Cocker Machine & Foundry Co. An improved clutch has replaced the old type clutch formerly installed on the Cocker warper, while the brake has been placed in the end of the drum. Self-aligning ball bearings are used on the carrier rolls. This was the first showing of the new vertical cone creel for rayon warping and, while a single package creel was exhibited, the company is manufacturing magazine creels also. An electric eye-board stop motion is provided. Although warping speeds vary according to the yarn being run, this type of rayon warper is operating under actual mill conditions regularly at 200 yd. per minute.

On exhibition in the Foster Machine Co. space was the new Draper high-speed warper operating at a speed of 410 yd. per minute. An outstanding feature is the direct silent chain drive supplied by the Whitney Mfg. Co., eliminating all noise. Other improvements include a mechanical sliding-bar stop motion, internal expansion brake at both ends of cylinder, patented beam friction, and patented beam-adjusting mechanism which prevents the beam from sliding on the cylinder. Hyatt roller bearings are used on beam shaft and cylinder shaft, while ball bearings are used on the front roll. The warper is Alemite lubricated.

Lestershire Spool & Mfg. Co. exhibited its frictionless fiber heads for spools used on its high-speed over-end warping system which was featured by a new improved Entwistle warper. This warper has been lowered about 2½ in. to relieve undue strain on the operative. Other changes in the design of the machine include elimination of the back comb, making it necessary to thread only one comb, the installation of a Whitney silent chain drive, and adoption of a Veeder-Root predetermined yardage clock. The warper was operating at the show at the rate of 520 yd. per minute on 50s single yarn.

Weaving Machinery

THE loom exhibits were the largest in the exposition. The Crompton & Knowles Loom Works demonstrated a new shuttle-changing 1x1 silk loom equipped with elevating beam stands, paperless warp beam, electrical warp stop motion, and large-diameter take-up roll covered with "rubber" sandpaper. In this loom the changing of the shuttle is accomplished without the machine slowing down. Another new machine in this

exhibit was a silk loom equipped with simplified cone harness and having 61 fewer parts than its predecessor. This loom is equipped with the No. 15 electro-mechanical feeler motion, which stops the loom with the shuttle in the plain end before the filling is exhausted. The drive embodies a three-point method of supporting the motor and a friction clutch of internal-expanding-ring type.

A number of new feeler motions were shown by Crompton & Knowles, including the electric and electro-mechanical Nos. 14, 16, 18, and 19, which stop the loom with the shuttle on the drop-box side, and the Nos. 15 and 17, which stop the loom with the shuttle on the plain side. Another new C. & K. development is the Randall Universal joint used on the driver levers of the drop box, which is packed with grease to afford better lubrication and to eliminate spattering of the cloth. New ball-bearing whip-roll poppets eliminate unevenness in the let-off action by preventing trouble from sprung gudgeons and worn or cramped cast-iron poppets. This concern featured the recently extended use of its automatic let-off with floating beam in ball-bearings.

L. E. Wooten of Lestershire Spool & Mfg. Co., who responded to the address of welcome at the opening of the Southern Textile Exposition last Monday

Great interest was shown by visitors at the show in the new X-Model loom exhibited by the Draper Corp. The model demonstrated was a 40-in. loom running at 190 picks and making a roll of cloth 20½ to 22 in. This new machine is equipped with two short, durable, and easily repaired rocker shafts, frogs designed to give an easier stop; large yarn beam; large shuttles; durable and easily removable pick shaft; anti-friction bearings; Alemite greasing; improved oiling system; improved bang-off; automobile type of quick-acting brake; new friction clutch without end thrust; and improved take-up drive.

Another new loom on exhibition in the Draper booth was the No. 2 Model for rayon. This is a single-shuttle machine equipped with helical gear and worm take-up and separate wind-up mechanism, which permit using a wooden cloth roll that is removable from the roll shaft; this mechanism gives a steady positive pull. The new loom also has a mechanism for releasing the whip roll when the weaving is stopped over night to prevent the formation of starting marks when work is resumed in the morning. For rayon filling a so-called battery non-sloughing device is used, which prevents sloughing off in the battery or on change. Other features on this rayon loom include a proximity-type loom side, new No. 23 battery, and No. 17 warp stop motion with sliding bars having higher teeth and wider openings. For use with this loom the builder recommends a shuttle with new No. 188 eye for giving steadier tension on rayon filling.

A new model S-4 silk loom with 2x1 box motion and dobby was also shown by the Draper Corp. Features on this loom include sand-roll and cloth-roll bearings line-reamed in place, moisture-sealed sand roll, arrangement for changing positions of driving parts to distribute wear on the crankshaft, improved shuttle-box mechanism, split type of picker-rod stand, replaceable bronze bushing in lay end, extra crank- and bottom-shaft bearings, roller bearings if desired, choice of two box motions, positively raised and lowered reed for distributing wear, simple cone-harness motion, midget feeler which stops loom with shuttle in plain end, arrangement for disconnecting take-up pawl when shipper handle is off, helical gears in take-up, and removable cloth roll.

Other Draper developments in weaving equipment include a Stafford thread cutter which moves into operating position at an oblique angle to the shuttle and falls away at the same angle, conforming to the action of the thread, and a No. 32 Midget feeler with spring-wire tip. Of particular interest in the Draper booth was a newly designed let-off motion which has not as yet been placed on the market. This mechanism is expected to give uniform tension from pick to pick and from full beam to empty beam. Uniformity is obtained by the use of a suspended weight, which provides the only tension. A chain connects the weight over pulleys to the whip roll, which is mounted in ball-bearings. Movement of the whip roll operates a cam which in turn governs the number of teeth taken by the pawl on the let-off gear and hence controls the amount of warp delivered. An important feature of this let-off is the manner in which the sheet of warp passing from the lower roll to the upper, parallels the sheet of warp passing from the top of the whip roll to the harnesses. The movement of the whip roll parallels these sheets and hence there is no angle of warp varying with the movement of the whip roll.

The Stafford Co. demonstrated a new 2x1 silk loom equipped with one-shot oiling system requiring only one pull on a lever for complete lubrication. The model exhibited was equipped with roller bearings and a new feeler which stops the shuttle at the single-box end of the lay. The take-up arrangement on this machine removes strain from the cloth-roll stand, by having all bearings for take-up gears located on the loom frame. Special attention has been paid to mounting the bunters on the loom frame and designing them for rigidity and simplicity, working parts being inclosed to eliminate any possibility of their clogging. The picking motion has likewise been improved.

A new Stafford cotton-broadcloth loom was equipped with special harness cams designed to eliminate crowding of yarn when the sheds are passing each other. Top rollers are mounted on one main shaft; and this arrangement, in combination with a harness leveling device, makes possible leveling the harnesses at any time without disturbing the loom. New Stafford dobby jacks were shown. Representatives of the Stafford Co. explained how its new rayon loom has made possible assigning sixteen looms per weaver without detriment to the cloth.

Weaving Accessories

Considerable interest was shown in a demonstration by the Steel Heddle Mfg. Co. of a Draper loom weaving 144x76 broadcloth on four harnesses. This development was made possible by the construction of the heddles, which are of comparatively slender wire, tempered steel,

with eye openings just large enough to permit passage of the thread. The Steel Heddle Co. also showed its new mechanical harness warp stop motion, which uses heddle wires as drop wires. This motion eliminates the ordinary drop wires, affords quick action, has self-adjusting features, is positive in action and simple in construction, and can be easily attached to any cam loom. It is claimed to improve the quality of the fabric by eliminating pickouts, to require less work on the part of the weaver, and permit broken threads to be seen quickly.

Another Steel Heddle development is a harness for plain cotton fabrics, such as print cloth and broadcloth, having two sets of heddle bars per frame, one bar $\frac{1}{4}$ in. higher than the other. On four-harness weaves this arrangement produces eight sheds, instead of four. When such material is reeded four ends in a dent, the yarns are placed one above the other, instead of crowded side by side, with the result that there is less end breakage. This company also showed an all-metal reed for worsted fabrics, affording increased strength and longer life, and exhibited a new drop wire with improved finish, cleaner surface in the thread opening, and guaranteed rust-proofing.

The Charles Bond Co. exhibited Bondaron pickers for silk looms and for Draper cotton looms. Both types are claimed to be durable and give a good cushion. Bondaron is a hairy type of leather, specially tanned. This concern also showed new Bondaron friction leathers for full-fashioned hosiery machines. The David Brown Co. exhibited a new adjustable mechanical tension device for shuttles which maintains constant tension on the yarn in both directions of the shuttle movement. A new adjustable harness strap was shown by Graton & Knight, affording accurate and quick adjustment through lever and clamp; full strength of strap, due to absence of holes; equally distributed strain; and elimination of stretching in the steel hook supporting the harness hook. An important leather-belting development exhibited by Graton & Knight was the new tension-cemented leather belting, affording large and uniform adhesive strength, flexibility, insurance against water damage, and reasonable cost.

The E. H. Jacobs Mfg. Co., Inc., showed its new Master Verybest lug strap, which is intended to replace the Verybest lug strap. This is a molded product designed to give each layer of fabric an equal share of the load. The extra wearing surface formerly obtained by an extra plug riveted in the heel of the strap is now obtained by a plug built in as an integral part of the strap itself. E. H. Jacobs also exhibited its new loop picker with Textolite insert and its new Textolite parallel plug and treadle roll. The newest Jacobs product is a Textolite truck wheel, claimed to have unusual strength, to be light, and to resist chipping. The resiliency of this wheel prevents damage to floors.

A new filling feeler for silk and rayon looms, exhibited by the Rhode Island Warp Stop Equipment Co., embodies a two-pole plunger with the bearings carried well forward to enter the shuttle box and support the plungers as close to the point of action as possible. No pins or plungers project through the back part of the feeler.

At the booth of the Shambow Shuttle Co. was exhibited a new improved Fuller eye with positive adjustment for automatic weaving of rayon. The steel plates in this eye are adjusted for pressure by means of a screw, which is prevented from turning during operation by a locking spring. This concern also showed its new Paterson coil-spring tension for rayon shuttles, providing uniform tension and eliminating danger of smashes.

Several improvements in warp-twisting-in machinery were demonstrated by the Warp Twisting-In Machine Co. These include a simplified spiral, made more foolproof; new top clamp, more durable and with freer motion; improved stationary pad holder with spring tension device and screws which may be adjusted to regulate the pressure for proper twist; and improved cut-off mechanism and knife, the latter having a key slot and being fastened without difficulty by a screw. The Warp Twisting-In Machine Co. also exhibited a new knot tying-in machine for use with high-twist yarns. This machine automatically selects the threads of the old and the new warps and ties them together with a flat square knot, cutting off the ends of the yarn $\frac{1}{8}$ in. from the knot.

The Watson-Williams Mfg. Co. showed new chromium-plated tension pads for automatic- and plain-loom shuttles for weaving silks, rayons, worsteds, and fine cottons and an improved shuttle eye which practically eliminates unthreading from the back.

Although no knitting machinery was on exhibition at the show, some new fabrics knitted on tricot warp machines were shown by the Collins Loom Works. These machines are said to have new cams, tension devices, and reinforced roller arms, and to operate at higher speed.

Bleaching, Dyeing, and Finishing Equipment

SEVERAL machines for finishing departments were exhibited by the Curtis & Marble Machine Co. These included light-running Type S inspecting machine for silks, rayons, and light-weight goods with forward and reverse motion, variable speed, and measuring device with counter; Type S No. 25 railway sewing and rolling machine, for silks, rayons, and light-weight goods, light running and equipped with variable speed and measuring device with dial; No. 23 railway sewing

A view from the stage, showing the exhibits on the second floor and balcony

machine with silent-chain drive; No. 20 portable motor-driven sewing machine; and No. 20 sewing machine with Merrow butted seamer. These machines are all driven by small motors operated from a lighting socket.

In the booth of H. W. Butterworth & Sons Co. were shown improved Foxwell guiders with self-contained air-pump unit. Representatives of the company discussed the new Butterworth kier, which has recently created so much interest in textile bleaching circles and which has been described in detail in past issues of TEXTILE WORLD.

Three new extractors were demonstrated in the booth of the American Tool & Machine Co. One of these was a 26-in. model equipped with safety device to prevent starting of the machine until the guard is down and raising the guard while machine is in motion. Another new extractor in this booth was a 5-in. motor-driven model holding a single package; this may be used for many purposes in the laboratory, or a number of them can be employed in place of one large extractor for efficient distribution of the operator's work. The third extractor in this exhibit was a 40-in. link-suspended model with a new unit control designed to throw on a light and ring a bell when the brake is automatically applied at the end of the time interval for which the control is set.

The Duriron Co.'s exhibit included a self-priming acid pump, capable of unloading a tank car in 50 minutes and of priming itself on a 20-ft. suction lift. Another Duriron development is an ejector for handling hypochlorite bleach, open at the back end to permit free circulation. This company featured Durimet, a nickel-chromium-silicon steel capable of withstanding weak sulfuric acid and caustic soda.

A new rubber-covered expander equipped with rolls of larger diameter and with anti-friction bearings was displayed by the Thomas Leyland Machinery Co. The Merrow Machine Co. showed its new 60JDC and 60HD-1 machines for seaming and blind-stitch hemming rayon fabrics.

The Permutit Co. demonstrated a completely synchronized electro-chemical feed, positive in operation. Water entering the mill is passed through a meter, to which is attached an electrical device actuating the Arco valve. Emptying and filling are controlled by a float switch. Permutit also showed an improved Ranarex CO_2 recorder and a new small water softener to be used for backwinding-solutions in full-fashioned hosiery mills.

The Philadelphia Drying Machinery Co. demonstrated a new truck dryer for skein yarn and Franklin packages, having more compact and efficient design than previous models. A vacuum extractor for wool, worsted, cotton, rayon, and pile fabrics shown in continuous operation by this company embodies an improved slot-closing device and an improved combination plaiter and batcher. Particular emphasis was laid on an improved raw-stock drying machine, claimed to give greater capacity in the same floor space at less cost.

There were a number of exhibits by concerns selling chemicals to the textile industry. E. F. Houghton & Co. displayed its new Cottonlubric No. 37, a neutral softener of single strength; Cottonlubric No. 38, a double-strength softener; Silklubric No. 30, for throwing; and Raylubric throwing cream, used with Raylubric size No. 3 for rayon crepe, giving satisfactory clearance and deadening the yarn without elaborate steaming or setting.

Arnold Hoffman & Co., Inc., showed new Ahco products, including gums and soluble greases, emphasizing a new printing gum which is a combination of four other printing gums and is claimed to afford better color value. A new high-test calcium hypochlorite was displayed by the Mathieson Alkali Works, Inc., applicable to laundry and textile bleaching; this product is known as HTH and is a dry free-flowing powder containing 65% of available chlorine. Oakite Products, Inc., emphasized a wider application of Oakite in connection with peroxide bleaching. The Penick & Ford Sales Co., Inc., displayed new starches and gums for finishing plants. A new dull finish for silk or rayon goods, woven or knitted, was featured by the Quaker City Chemical Co. This is claimed not to affect the dyed shade and is put on in a cold bath as the last process. Representatives of the Roessler & Hasslacher Chemical Co. discussed the widened application of peroxide to cotton bleaching and showed by samples the results of the comparatively recent application of peroxide to the treatment of cotton batting.

Auxiliary Mill Equipment

THERE were a number of new developments shown in recording, controlling, and testing equipment. Henry L. Scott Co. exhibited a new single-strand tester reading in one-thousandths of a gram, a ball-burst tester for knitted fabrics, and the Scott calculating attachment for direct dial readings in terms of computed tensile strength at any standard of regain. A regain balance which serves as auxiliary apparatus for the last mentioned tester was demonstrated. In the exhibit of the Aldrich Machine Works, southern representative of the Henry L. Scott Co., were shown a new Aldrich regain indicator for use in maintaining uniformity of picker laps and a regain controller for testing laboratories, which it is claimed will condition the room to give any regain desired in the material being tested.

New developments in the Productimeter pick counters exhibited by the Durant Mfg. Co. include composition built-up digit wheels with gears and all wearing parts made of steel for increased strength and durability. Fairbanks-Morse Co. exhibited its new picker-lap dial scales, which have a minimum number of working parts and use the double pendulum principle. The 14-in. dial chart is graduated in ounces. This scale is also suitable for skeins of yarn and rolls of cloth. Fairbanks-Morse Co. has been experimenting with the use of stainless steel pivots and bearings for preventing damage by moisture, and has now adopted this material as standard.

The Belger Co. demonstrated its new sliver tester to be used in conjunction with its roving tester for locating unevenness. A new self-contained electrically-operated recorder controller was exhibited by the Bristol Co., together with a double-service air-operated recorder-controller, each machine accessibly located in a moisture and fume-proof case. A new dye-tub control which raises the bath water to the desired temperature and holds it there for a predetermined time before automatically shutting off the steam and turning on a light was displayed by the Foxboro Co. Alfred Suter demonstrated his new Suter-Webb duplex cotton fiber sorter designed to meet the requirements for the new method of sampling and sorting developed at the Department of Agriculture.

In the booth of the Clemson College Textile School was shown new hypochlorite and aktivin volumetric analysis apparatus. Veeder-Root, Inc., demonstrated a new trip total pick counter. This is a double counter,

one set of dials totaling the weekly or daily production, it being possible to return the other set to a zero reading in order that a new start may be made of resetting pick counter. Veeder-Root also showed its new Tanner type of resetting pick counter; provision is made in this double shift counter for posting the expected production of each loom, which is valuable to both weaver and overseer.

Several improvements in humidifying and ventilating equipment were shown at the exposition. American Moistening Co. exhibited a humidifier, known as the Amtex, designed for small spaces where low capacity is required and which is equipped with an electric control device for maintaining constant humidity. Also featured by this company was a dial on the humidity control designed to facilitate the regulation of relative humidity.

Introduced at the show was a high-speed humidifier, made by the Bahnson Co. and including several new features, as follows: airplane type fan, motor and case of stream-line design, permitting an unobstructed flow of air, complete new individual control which employs the same controlling element used in the Bahnson master humidity control, specially designed motor furnished by Westinghouse, and a new screen which protects the disk and grid from dirt accumulation. The humidifier running at the show was evaporating 10¼ gal. per hour and it was said to have evaporated 9 gal. per hour in a coarse yarn spinning room four days after cleaning.

Bahnson also exhibited a master control designed to operate a group of humidifiers, so as to maintain constant relative humidity throughout the room. In addition, this company introduced an individual control which is particularly sensitive and which is adaptable to the old type humidifier.

Carrier Engineering Corp. featured a suspended type unit air conditioner designed particularly for mills with limited floor space. This unit is equipped with automatic electrical temperature and humidity control. This concern also exhibited a vertical-type unit air conditioner in which a stationary nozzle has replaced the center jecter. A room cooler adapted to offices and other small spaces, operated by compressor and equipped with cool coil, fan, and Mercoid control, was shown by Frigidaire Corp.

One of the interesting exhibits at the show was the new automatic ventilation control offered by Parks-Cramer Co. and shown for the first time. This system is designed to increase the rate of air change as much as possible without reducing the relative humidity in the room and it thereby obtains a maximum amount of cooling effect from a direct-moisture air-conditioning system while the humidifiers run practically without stopping. This system enables a mill already equipped with a direct-moisture humidifying system to obtain a decided cooling effect in warm weather and involves a comparatively small additional investment. Parks-Cramer also exhibited a unit air conditioner for offices, laboratories, and small manufacturing spaces. Hygroscopic regulators, both electric and pneumatic types, were also shown.

The Merrow Machine Co. featured its new style 60-HD-1A machine for blind stitch underwear, etc., special improvements being greater blindness when passing over seams, while there is a new stitch formation which improves the appearance of the hem itself. Fridigaire Corp. exhibited a conveniently arranged electrically refrigerated multiple water cooling installation. Cooling units of this system are mounted on ceiling or walls, effecting a saving in floor space, while several tanks can be connected with one compressor. Huntington & Guerry, Inc., exhibited the new model General-Electric Pressure water cooler and drinking fountain which utilizes the overflow of cold water to pre-cool incoming water, thus effecting an economy of operation.

Finnell System, Inc., featured a new combination scrubber-absorber and dryer which scrubs floor and absorbs the water at the same time and effects an economy in labor.

Continental Diamond Fiber Co. exhibited a spinning bucket made of Celoron and which is not affected by

Some of the exhibits located in the temporary annex to Textile Hall during the exposition

chemicals in the rayon plant. Fibre Specialty Mfg. Co. featured the improved dreadnaught roving truck. Rockweave Mills emphasized one of new uses for cotton by an exhibit of canvas baskets and trucks equipped with improved guard rails affording protection against rough usage. This concern also provided a new interlining of light sateen in baskets and trucks for use in rayon plants where fine yarns must be protected from rough surfaces. Walton Trunk Co. exhibited the Challenger roving can made of new material with improved construction.

Packing materials and equipment exhibited at the show included a new patented bale-tie cutter made by the Acme Steel Co. of Georgia for cutting round ends. This company also featured a new portable steel reel and stand which is designed to eliminate tangling of the band and is adjustable for any size coil. O. B. Andrews displayed improved paper shipping containers of double box construction with flanged tops and bottoms, designed to prevent easy pilferage in transit and at the same time afford a dust-proof container. Signode Steel Strapping Co. showed a new combination strapping machine and also exhibited new baling tools.

Several new office machines were shown. A. B. Dick Co. exhibited its new Model 96 which has an improved method of feeding, better inking device, and provides a higher operating speed. The Addressograph Co. featured

a special payroll and dividend check Addressograph which imprints the name of payee, amount, and signature on the check. A new suction feeder was shown operating on the standard multigraph printing machine in the American Multigraph Sales Co. exhibit. Monroe Calculating Machine Co., Inc., featured a small model electric calculating machine. New telephone-typewriter equipment was shown by the Southern Bell Telegraph & Telephone Co.

Power and Engineering Equipment

A LARGE variety of power and engineering equipment was on display at the exposition. A new loom switch, known as "Bulletin 609" was shown by the Allen Bradley Co. This is equipped with a safety type of cabinet and double brake contacts both operating in relay, pedestal mounted and operated by either foot or hand.

A number of miscellaneous articles made of aluminum were on display by the Aluminum Co. of America. These included new cop butts for heavy duck, complete cops and quills, spools made up for reasonable pricing, dyeing tubes and cones, drying rods for rayon skeins, harness frames, Axminster carpet tubes, and tenter chains for the held-to-width dyeing process.

American Hard Rubber Co. featured use of hard rubber for lining steel tanks for peroxide bleach liquor. In the booth of the American Pulley Co. were shown two new case trucks of pressed steel, of welded construction and having semi-steel plain bearing wheels, with rubber-tired wheels as option. The company also displayed V-belt sheaves of pressed steel, each ring being pressed out separately, and complete units built up of any desired number of grooves; also exhibited new conical-shaped pile shoes for use where hardpan is encountered.

A new engine lathe was demonstrated by R. S. Armstrong & Bro. Co. Much interest was shown in the Bijur system of central lubrication for industrial machinery exhibited by the Bijur Lubricating Corp. In this system the control of oil flow is accomplished without the use of moving parts. It is fed to the bearings over a period varying from two to five minutes. Oil of any grade or viscosity may be used.

The Bond Foundry & Machine Co. exhibited a new three-wheel dolly for shifting heavy packages and embodying swivel castings with ball bearings. New rubber-tired pressed-steel casters were included. The Clipper Belt Lacer Co. exhibited a new speed lacer capable of handling a 6-in. belt in 1½ minutes. A cone seat globe valve for severe conditions on throttling service or where water and sediment are present in the steam was shown by the Consolidated Ashcroft Hancock Co. This concern also showed a straight line valve with opening flow characteristic recently applied to slashers and finishing machinery. Crouse Hinds Co. featured increased flexibility and wider application of its flexible fixture hangers and cushion sockets. It also displayed a new tumbler switch cover for dyehouses and other applications.

The Dayton Rubber Mfg. Co. has recently applied a rubber cover to the top of its cog belt drive. The Diamond Chain & Mfg. Co. distributed a new data book to facilitate the ordering of motor drives from stock. A new graphite paste for sealing screw thread, flange and gasket joints, etc., was exhibited by the Joseph Dixon Crucible Co. Dulux, a synthetic resin oil type of paint in machinery and exterior protective finishes, was displayed by E. I. Du Pont de Nemours & Co.

The Eclipse Air Brush Co., Inc., showed a detachable tubular extension for low-pressure spray guns, enabling high places to be reached without the aid of staging.

In the booth of the General Electric Co. were shown a number of new control features. These included inclosed combined magnetic and fuse-disconnecting switches, requiring less wiring and space, hand-operated and automatic starting compensators; and devices for providing against shut-down in industrial machines due to failure of power source up to a period of 2 seconds, contained in hand starting compensators or in push button units for magnetic across-the-line starters and automatic compensators. General Electric also demonstrated an operator producing a straight line thrust. General Electric Vapor Lamp Co. is now painting its fixtures gray instead of black. This company displayed its new neon glow lamps which may be burned 24 hours per day at a cost of 5c. per month, and its Kon-Nec-Tor mercury switches for use in explosive atmospheres.

New extra-heavy single loom belting was shown in the Holyoke Belting Co. Huntington & Guerry, Inc., exhibited new General Electric water coolers for industrial plants. In the booth of the Hyatt Roller Bearing Co. was shown a Model E Draper cotton loom equipped with seven Hyatt roller bearings—three on the crank shaft, two on the bottom shaft, and two on the rocker shaft, saving, it was stated, 12% in power, 65% in maintenance, and 50% in repair cost. Another bearing application shown in the Hyatt booth was on Saco-Lowell continuous stripper rolls. A simplified Hyatt bearing application was shown for spinning frame cylinders. The Illinois Engineering Co. showed a new small combination blast trap for slashers and finishing machines.

The International Nickel Co., Inc., showed seamless nickel tubes for rayon spinneret adapters, monel metal skein reel, monel metal moistening boxes for full-fashioned hosiery machines, emulsion troughs for the same type of machine, monel metal bobbin pin boards, and seamless sink bowls for dyehouses, bleacheries, etc., stamped out from monel metal blanks.

The Ivanhoe Division of the Miller Co. exhibited new dustproof Glassteel diffusers, in which the glass is threaded at the top for fitting into asbestos gaskets. Also shown by this company were new shock-proof sockets built of phosphor bronze and inserted in standard sockets, new "Noon Sunlight" plates for color matching units, giving good diffusion without glare; and a new line of vaporproof units. Jenkins Bros. showed a bronze globe valve, known as No. 106-A, having extra depth of stuffing box, more spindle threads, etc.

In the booth of the Johns Manville Corp. were shown a number of products which the company has taken over during the year. These include Sil-O-Cel, an insulating material for temperatures as high as 2,600°; Filter-Cel, a powder for removing sediment when liquids are passed through a filter; Banroc material, for insulation for temperatures up to 1,000°, a "rock court" vermin-proof block consisting of Banroc compressed with a proper binder for refrigeration purposes.

The Link-Belt Co. demonstrated its new PIV speed transmission, a positive, infinitely variable gear developed in England. It is operated by a chain of unique construction, running between two adjustable gears. The Louis Allis Co. exhibited its new underwriters Class 1 explosion-proof motor and new self-cleaning motor.

The Lunkenheimer Co. featured its new "SA" globe valves for acid service, especially recommended for han-

dling sulfuric acid of all concentrations and other corrosive fluids. These valves are made of a nickel composition and offering unusual resistance to corrosive action. The new King clip gate valve was shown by Lunkenheimer.

Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., displayed its new Condor Textyl belt made from high-count duck with rubber skins between the plies and covered with light rubber. This belt is thinner than usual for transmission purposes, but is strong and has the advantage of holding fasteners well. The Condor products shown were V-belts and loom picker and harness straps. This company featured a new method for sticking fabric pulley lagging to cast iron or steel pulleys without the necessity of taking the pulleys from the shaft, drilling holes, or applying bolts.

Featured by the Reeves Pulley Co. were a new electric automatic control for variable-speed transmission, by which speeds may be infinitely regulated over a predetermined range entirely automatically; and an electric remote control.

The Square D Co. demonstrated its new enclosed safety distribution panel, which has a dead front and is safe when under full load and when open, it being completely protected at all points. Opening any panel instantly disconnects all live parts, although it leaves the fuses accessible upon their base. A new interior mill white made in flat semi-gloss and full-gloss was shown by Stewart Bartleson Co. The Taylor Colquitt Co. featured mill village steps with stringers pressure creosote treated and with treads treated with zinc chloride to permit their being painted.

The Texas Co. demonstrated by means of a working model that card comb boxes can be run on spindle oil by new adjustment of the bearings for better circulation, lower operating temperature, reduced cost, freedom from leakage. It is possible for a mill to make the changes in its own machine shop while the cards are being ground. The Texas Co. also displayed a new No. 906 grease for calender roll journals, capable of withstanding high temperature but having plenty of free oil. A No. 910 grease shown by this company, capable of withstanding moderately high temperature, is suitable for bleaching, printing, and similar machines.

Henry Tschudy, although featuring his well-known shuttle truing machine, exhibited a new reduction vise, by means of which small and unhandy objects can be easily supported, the gripping jaws being adjustable in height as compared with the table surface surrounding them. Mr. Tschudy also displayed new micrometer calipers. The Watson-Williams Mfg. Co., selling agents for Industrial Drives, Inc., showed new applications of the automatic coupling unit and speed accelerator to motor driven card application.

The Westinghouse Electric & Mfg. Co. displayed a new individual loom motor, rugged in construction and cooler running; motor watchman starters for loom motors; new thermal type relay protecting against overload and single phasing; improved Micarta rayon spinning pot and motor; and new "Nufuz" panel board for lighting and small power distribution, employing circuit breakers in each circuit. The Westinghouse Lamp Co. exhibited a control relay operated by ultraviolet ray.

The Whitney Mfg. Co. demonstrated its new reversible silent type chain designed to contact with sprockets on both sides and obtaining reverse operations on various shafts. It can be connected directly to some motors at high speeds. The drive is claimed to be efficient, quiet, and smooth running. Two applications were shown, one on the reverse drive applied to the Whitin wool spinning frame and one on the Saco-Lowell cotton roving frame. The Whitney Co. is now building roller chains from $\frac{3}{8}$ to 2 in. in pitch.

The following concerns, although reporting no 1930 developments, exhibited their well known standard lines of equipment and products:

Allis-Chalmers Mfg. Co., American Kron Scale Co., Armstrong Cork Co., Armstrong Machine Works, Ashworth Bros., Inc., Atlanta Brush Co., Barry Pulley Co., William Bayley Co., Bowen-Hunter Bobbin Co., Carolina Asbestos Co., Carolina Rubber Co., Carolina Supply Co., Century Electric Co., Charlotte Leather Belting Co., Clinton Corn Syrup Refining Co., Corn Products Refining Co., Dana S. Courtney Co., Crane Co., Detroit Graphite Co., R. & J. Dick Co., Inc., Eberhardt Faber Pencil Co., Economy Baler Co., Economy Engineering Co., Fairbanks Co., Fisher Governor Co., L. H. Gilmer Co., Greenville Textile Supply Co., Hires Turner Glass Co., Howe Scale Co., C. W. Hunt Co., Inc., Keever Starch Co., Keystone Lubricating Co., Kubar Mfg. Co., Lambeth Rope Corp., Latrobe Tool Co., McLeod Leather & Belting Co., Mead Sales Co., Inc., Montgomery & Crawford, Odell Mill Supply Co., Frank E. Paige & Co., Plibrico Jointless Firebrick Co., Powers Regulator Co., Sherwin Williams Co., Standard Crayon Mfg. Co., Standard Oil Co. of New York, Stein Hall & Co., Inc., Sullivan Hardware Co., C. J. Tagliabue Mfg. Co., W. O. & M. W. Talcott, Inc., Taplet Mfg. Co., Taylor Instrument Cos., Terrill Machine Co., Texwood Mfg. & Sales Co., Inc., Toledo Scale Co., Tortion Balance Co., Transmission Ball Bearing Co., Inc., United States Electrical Tool Co., Vacuum Belting Co., Vermont Spool & Bobbin Co., Joseph A. Vogel Co., T. B. Wood Sons Co.

A view of the exhibits located in the permanent annex to Textile Hall

Non-manufacturing concerns which had exhibits were:

Lockwood-Greene Engineers, Inc., Port Utilities Commission of Charleston, S. C., and J. E. Sirrine & Co.

The following rayon producers had attractive displays at the show:

The American Enka Corp., American Glanzstoff Corp., Celanese Corp. of America, Du Pont Rayon Co., Tubize Chatillon Corp., Viscose Co.

A display of synthetic yarns, new apparatus and unique fabrics collected from all parts of the world was shown by Dr. Charles E. Mullin, professor of textile chemistry and dyeing, of Clemson College, S. C.

Well Attended Meeting of

Southern Textile Association

During Textile Week in Greenville

J. O. Corn, president, S.T.A.

PRACTICALLY every cotton manufacturing center of the South was represented in the large attendance at the semi-annual meeting of the Southern Textile Association which was held in the Poinsett Hotel, Greenville, S. C., Oct. 24. Although officials of the Association arranged a short program in order that members could spend most of the day visiting the machinery and equipment displays at the Southern Textile Exposition, the addresses delivered at the meeting were of particular interest and incited much favorable comment.

The meeting was called to order at 11 o'clock Friday morning by President J. O. Corn, of Pacific Mills, Columbia, S. C.

Efforts directed toward expanding markets for cotton goods were described by C. K. Everett, of The Cotton-Textile Institute, New York, N. Y., whose address immediately preceded the luncheon program. Recent progress that is being made in the development of additional uses for cottons was discussed by the speaker.

The second address was delivered by George S. Harris, formerly with Exposition Cotton Mills, but now associated with the Hunter Mfg. and Commission Co. His exceptional background of experience in cotton manufacturing and many years of active participation in the affairs of the American Cotton Manufacturers Association, The Cotton-Textile Institute and other manufacturers' organizations contributed to an intelligent discussion and sound interpretation of present-day problems. The subject of the address by Mr. Harris was "The Mill Executive's Position Today."

One of the most delightful features in connection with the Southern Textile Exposition was the luncheon program arranged for members of the association and presented in the main dining room of the Poinsett Hotel. Edwin Howard, of Fales & Jenks Machine Co., chairman of the special entertainment committee, was in charge of the program, while Arthur M. Dixon, of Gastonia, N. C., past-president of the American Cotton Manufacturers' Association and of the Southern Textile Association, acted as toastmaster.

The only address at the luncheon was by Dr. Howard E. Rondthaler, president of Salem College, Winston-Salem, N. C., entitled, "What Do You See When You See a Cotton Mill?" Sketching the early development of cotton manufacturing in the South and pointing to the extreme difficulties under which the pioneer southern mill executive operated, Dr. Rondthaler urged the present generation of textile folk to keep in mind the struggles of the past in considering southern mill conditions.

New Uses Work Specially Vital to South

"THE task of increasing the use of cotton is not reserved for a relatively small group devoting its entire time and attention to this question—it is a job which is big enough to warrant the support of every individual in this industry." That is the message of C. K. Everett, of the New Uses Section of The Cotton-Textile Institute to the Southern Textile Association. He outlined the work of his section to date, and touched not only upon the new fields for cotton fabrics but upon broadening existing markets as an equally serviceable function. Forwarding this work will not only aid the mills themselves, but by stimulating demand for cotton will increase the prosperity of the agricultural communities depending upon the staple which are close neighbors to the manufacturing communities represented in the membership of the Southern Textile Association.

Mr. Everett's address follows in part:

When the Institute was organized, one of its major activities was concentrated in a portion of the staff designated as the New Uses Section. This name is to some extent a misnomer because we are concerned not only with the discovery and development of new uses of cotton, but also the extension of present uses and established markets. Broadly speaking, the work of the New Uses Section may be defined as market research, promotion, consumer and trade education.

In our studies we have considered the use of cotton from the standpoint of three major classifications. These may be described as follows:

1. Style markets, which include wearing apparel of all types and some uses of decorative fabrics.

2. Household or domestic uses such as sheets, towels, bedding, etc.

3. Industrial uses, including a large number of products used in other industries in which the identity of cotton may be completely lost or greatly transformed, including such things as automobile fabrics, artificial leather bags and bagging.

Style Developments in Cottons

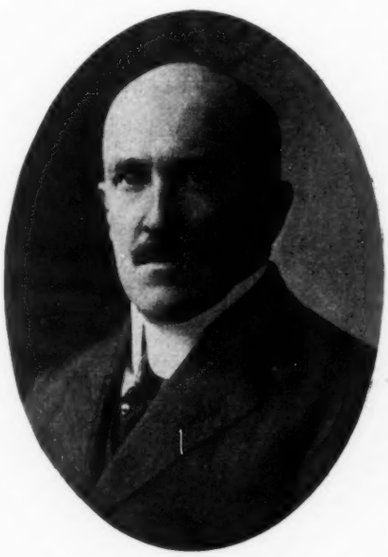
As many of you know, there has been a distinct revival of interest in cotton dress fabrics during the last two years which has gone far toward giving cotton a wholly new place of fashion importance. We believe—and we are glad to hear others tell us—that the Institute has been a helpful factor in promoting the fashion importance of cotton through its advertising and education work during the last two years. In this period it has spend upward of $250,000 in a comprehensive effort embracing advertising, promotion and special educational services.

During the past season particularly we have seen a great re-awakening of popular interest in cotton. All of this is of great psychological importance because to a large degree the public thinks of cotton most often in terms of wearing apparel. Whatever enables cotton to command more attention in this particular field makes it more widely discussed and creates greater popular interest. This in turn leads to an enlarged demand, one of the objectives which we have set.

As an example of one of the Section's studies of industrial uses I should like to tell you something of our investigations of the use of cotton for packaging vegetables, fruits and other commodities in retail containers. In this instance, manufacturers and selling agents interested in increasing the sale of narrow sheetings, authorized the Institute to make a survey to promote a greater use of bagging constructions.

As a result of this study experiments are now being made with a new type of open mesh cotton fabric that will be suitable for shipping citrus fruits in similar small bags.

Another market in the industrial group which the Section has studied has been concerned with the use of cotton fabrics in highway construction. Here a lively and increasing interest has been manifest by highway officials, highway engineers and builders and by the public. This market is particularly important in view of the large expenditures for public works that are now being made or are projected.



Edwin Howard, presiding officer at S.T.A. luncheon

It may be of interest to know that this relatively new use of cotton is being urged among highway builders in England and we understand that this proposal was promoted directly as a result of what The Cotton-Textile Institute has done.

Experiments in this country are now being made by highway engineers in South Carolina and Texas. In South Carolina, where the first experiments reported to the Institute were made, this use of cotton has been under observation for nearly three years. Directly as a result of this work the highway department of Texas initiated similar experiments during the summer of 1929.

We have been advised that the highway officials of Georgia, North Carolina and Louisiana have become interested in this use of cotton and are contemplating experimental installations.

The importance of this potential market is apparent when it is realized that there are approximately 3,000,000 miles of unimproved rural roads in the United States and that for each mile improved by this method at least 3,500 sq.yd. of fabric would be required.

Members of this Association are, no doubt, familiar with the considerable attention which has been given in recent months to the use of cotton cloth for stationery and for varied other purposes by the printing industry.

In connection with the Institute's studies of this market we have undertaken inquiries concerning other uses of cotton by the printing industry. Lithographed cloth signs, for example, that are made for concerns engaged in large national advertising programs, represent a very substantial market for cotton. One company —a large oil concern —that introduced a new product this year required more than 250,000 yd. of cotton fabric for the lithographed banners that were a prominent feature of the company's sales campaign.

C. K. Everett who spoke on development of markets for cotton goods

In cooperation with Army Ordnance officers, a new type of cartridge bag cloth, made of cotton, has been developed. The Institute cooperated with army officers at the Picatinny, N. J., Arsenal in a series of tests from which specifications for the new fabric were formulated. The first contract for a quantity of this fabric has already been placed.

From time to time the Section has important opportunities to cooperate with representatives of other industrial organizations in seeking a solution of common problems. For example, we have worked with members of the National Tent and Awning Manufacturers Association in their efforts to extend the markets for their products. We have collaborated with the Linen Supply Association in their efforts to emphasize cleanliness, the opportunity here being significant as a means of stressing the use of cotton towels, uniforms and other items of cotton.

In cooperation with the Rubber Proofers Division of the Rubber Manufacturers Association the way is being prepared for the adoption of specifications that we believe will be mutually advantageous to these manufacturers and the mills making fabrics required for this purpose.

Special efforts have been made to emphasize the advantages of longer bed sheets. It is estimated that by increasing the length of the standard sheet to 108 inches an additional 20,000,000 sq.yd. of wide sheetings would be required annually in manufacturing the number of sheets now sold each year. Results of these efforts are apparent in the increased demand for longer sheets reported from stores that handle them and the stocks of 108-inch sheets ordered by merchants who have not generally carried them in the past. In cooperation with the simplified practice project carried on by the Department of Commerce, the Institute has been instrumental in bringing about the adoption of 108-inch sheets as standard for institutional purchasers. The 108-inch sheet is now used exclusively by the U. S. Navy and the U. S. Shipping Board.

A Job for the Industry

There is one other thought which I wish to leave with you. It is this: the task of increasing the use of cotton is not reserved for a relatively small group devoting its entire time and attention to this question. It is a job which is big enough to warrant the support of every individual in this industry.

You men represent an important group in the industry and

you can help in this great work by thinking more in terms of cotton and its use and encouraging every one with whom you come in contact to do likewise. There are many ways in which cotton can be used and is used in our mills, in our homes and in the communities in which we live. May I suggest, therefore, that you think more and more of the ways you can help by specifying cotton and using cotton wherever you have the opportunity to do so?

There is a sentimental as well as an economic interest which all of you have in cotton, living as you do in a section where it is so vital a factor in the agricultural and manufacturing communities in these states. Whatever you can do to stimulate demand for a larger use of cotton will serve a real economic purpose by increasing the prosperity of your community and thus benefit every one who is concerned with cotton, all the way from the farmer to the mill worker and resident in a section where cotton growing and manufacturing are so important.

Mergers Inevitable, Says George Harris

THE necessity of strong mergers, the importance of careful control of production, the soundness of the move to eliminate night employment of women and minors, and the necessity for a wage scale high enough to prevent suffering during layoffs, were emphasized by George S. Harris, of the Hunter Mfg. & Commission Co., Atlanta, Ga., in his address before the meeting of the Southern Textile Association at Greenville, S. C., Friday of this week. Mr. Harris paid a warm tribute to the work which that association has done in effecting progress in mill practice. He also gave credit to the machinery builders for the results accomplished in research and to the publishers of trade journals for their efforts in disseminating the results of the findings of the association.

Mr. Harris said, in part:

"Looking backwards we find many very valuable developments in our equipment and methods during the last 10 years contributing not only to the quality produced in our southern mills but to the earning power of our labor. In fact we are fast approaching the time when mills on the lower level as to equipment and management must go by the board. Stated in another way, we have reached the point when a southern cotton mill may be junked. Such a thing has seldom happened in our history. Mills have run on the rocks and capital structures have crumbled but the physical property stood until new capital took control and the old wheels continued under new ownership.

"I say now, due very largely to your progressive thought and action, some of these old mills are doomed and the sooner they reach the junk pile the better it will be for the industry as a whole. This statement will apply more especially to some of the smaller units originally organized for the sole purpose of 'having a cotton mill in somebody's town.' Developments during the last five years demonstrate beyond doubt that this type of mill cannot support the necessary talent to carry on under present day competition and must either give up the struggle or become attached to a larger unit or to a group of mills. In this way only can a small unit expect to enjoy at a reasonable cost the same advantages of technical and merchandising talent found in the larger organization.

"Under present day world competition in cotton textiles more intelligent merchandising and management methods are necessary than ever before and we may expect this to become more important as we move forward. Every expense item must be reduced to the irreducible minimum. Administration units must be spread over more production for the purpose of better control and lower management cost. The future seems to demand consolidation of the stronger mills and merchandising houses into units put together according to their fitness for handling production by groups and also the complete elimination of the weaker organizations. Only through such consolidations can the smaller mill hope to enjoy the advantage of technical and merchandising talent at a reasonable cost.

"What Is the Matter?"

"Realizing the terrific strain under which you have been working during the last 12 months, it occurs to me that you may be asking me what is the matter. Many speakers and press writers have tried to answer that time-worn question, "what is the matter with the textile industry?" until we all are quite fed up on it. I believe the industry has been seriously hurt by so much publicity on this question. Nevertheless, it seems appropriate and timely for me to give you a few thoughts on this point at this time. First—I would caution you to maintain your composure and courage. Think carefully through every move before you operate, realizing that you are coping with a condition which, while new to all of us, is prefectly natural and comes to all major industries sooner or later.

"Beginning in the '90s and continuing through 1920 our southern textile industry grew rapidly and, with the exception of certain periods of depression, we had a comparatively easy time. Our competition was in other sections of this country or abroad. For the past decade we have been working under very different conditions. Our competition now is among ourselves. With the increase in spindles plus your efficiency and most important of all plus your ability to operate efficiently at night, we are choking ourselves to death. It should be perfectly obvious to anyone that sooner or later every industry grows to that stage when it must solve the problems of excess capacity. We have very definitely reached that stage. In fact we were in that stage several years ago but not until now would all admit it. Our success from this time forward is in direct proportion to our degree of organization and the willingness of each individual operator to think in terms of his industry rather than his individual interest.

In a nut-shell we are trying to learn to control surplus production and in the process have thrown back on you and your labor, burdens you have never carried before. In this I am willing to admit that your chief executives, while appearing individually to thoroughly understand the problems involved, have failed collectively to show the courage necessary to make corrections before the damage is done. In justice to these men let it be said that their problems are much greater than they might appear to be on the surface. In our wisdom in this great democratic government we have saddled ourselves with laws whose purpose was to protect open competition and which very forcefully prohibit any move on the part of two or more producers which tends to a so-called combination in restrain of trade. As law-abiding citizens of this great country we love so well, the chief executives of southern cotton mills have leaned backwards in their effort to abide strictly to the letter of these laws. It is true the recent rulings appear to make a more liberal interpretation of the principles involved but these rulings are often couched in such technical phraseology as to only bewilder the layman into even more caution.

"Then again in our rapid growth we

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"In my opinion, when this industry is finally placed on a sound basis we will not recognize the general set-up as compared with what we see today. We are apt to find both men and plants considered good today entirely out of the picture then. Both men and equipment must be continually subjected to tests we have never known in the past and when either is found lacking the necessary efficiency to meet conditions, they must and will be set aside for better models."—*George S. Harris*

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have developed an industry badly scattered from Virginia to Texas, composed of great numbers of comparatively small units making it most difficult to weld the whole into one great efficient working unit. This isolation makes mutual understanding of problems almost impossible which necessitates unnecessary suffering on the part of capital, management and labor. We find both in our markets and in the mill office a general knowledge of our common problems, but an utter lack of any sympathy for our competitors. Individually we yet prefer to fight it out in a price war that no one can ever hope to win. This is a condition that time will cure with the able assistance of such agencies as The Cotton-Textile Institute and our various associations including your Southern Textile Association. In fact we have every evidence that certain fundamental weaknesses in this industry have been recognized by the Department of Commerce at Washington and steps have been taken to assist in making necessary corrections.

Geo. S. Harris who spoke on the position of the mill executive

"Now the question before you is what are you going to do about it? What part will you play in this great game? You have a most important part. I am willing to say that you are the foundation of the whole structure and our success depends to a very great degree on how you conduct yourself during this most difficult reconstruction period. Reconstruction period is certainly what this all means. In my opinion, when this industry is finally placed on a sound basis we will not recognize the general let up as compared with what we see today.

The Operating Executives' Responsibility

"Speaking to you collectively as an important department of management, I say that you have today a most unusual responsibility. I say to you individually that unless you are applying yourself 100% to your problems you may expect sooner or later to be junked along with the antiquated equipment some mills are attempting to operate. In addition to the task of leading your labor against adverse influences you are forced to continually find ways and means of reducing your unit cost and improving the quality of your product.

"You have learned to think in such terms as loom stops per day, ends down per thousand per hour, and others that are commonplace now, but were not considered of importance 10 to 12 years ago. Through improved methods you have materially increased the output per operative and per spindle and, most important of all, you are learning better methods of cost findings and cost control. I might say that your improved efficiency has played a large part in our undoing in that you have learned to operate efficiently at night as well as day.

"This has given us a surplus production very difficult to handle. On the other hand, this is not a charge I can lay to you but must charge your chief executives for not having found a way to handle their common problems. Night production has a place in the picture but should be used only when there is a marketplace for it. Constant maximum production has no place in any industry and when we attempt it we must expect to pay dearly for violating a fundamental law of economics. We are learning this and during the last year have paid a terrific price to old Professor Experience. It is up to you, our operating executives, to learn to fluctuate your production and while doing so maintain as nearly as possible a uniform cost.

"We cannot forget that one of the first lessons we learned is that the easiest way to reduce cost is to increase production. This principle has been over-worked during recent years when margins tightened. We continued to increase production to reduce cost but seemed to be amazed to find that this surplus production reduced our margins faster than anyone could reduce cost. We are forced now to find means of reducing cost other than increasing production and that, men, is very largely your job.

"Among your chief executives we find two schools of thought. With every one admitting an excess production one group holds to the fundamental idea that night operation caused all the trouble and therefore all night operation should be immediately and permanently abandoned, while a second group recognizes that a fluctuating capacity to meet a fluctuating demand is necessary and therefore night operation, in part, is needed only if and when such night operation can be sold at a profit. I feel quite sure that both groups have learned that night production for the sole purpose of reducing manufacturing cost is nothing less than industrial suicide. Personally, I believe that final solution will be found along the lines of the latter thought.

"A recent development is the move originating with The Cotton-Textile Institute which proposes through voluntary action, to eliminate all women and minors under 18 years of age from the mills at night. I consider this a very progressive step and it should have the full support of every one in the industry immediately. There is no need now for women to work at night to supply any trade requirement, and no one could possibly justify such employment except in an emergency. After mature consideration, it has been decided that we have reached a point in the progress of the industry when this rather bold step should be taken and the officers of The Cotton-Textile Institute hope that every executive will fall in line promptly. There appears to be a wide spread difference of opinion as to the effect this might have on production. Some operators are firm in the belief that they can spin at night without female spinners, while others are equally firm in the belief that ring spinning is a woman's work and will never be successfully handled by a man. With women eliminated we will soon learn something about spinning with men. My opinion is that very few will succeed at it.

"Getting back to the part of the plant executive we must expect in future to see your labor subject to more lay-offs. This means that wage scales must be on a level that will permit such lay-offs as becomes necessary to maintain proper production control to balance trade requirements. This is necessary in all other major industries and I see no reason why southern textile mills can be an exception. At the same time low cost per pound must be maintained which means less labor per unit of output. Weekly earnings of labor when employed should be increased where possible. It also appears that you may have some opportunity in training labor in sane use of money earned. If I did not have ginghams to sell, I might suggest as a village slogan, 'less gasoline and more ginghams.'

"Let me say in conclusion that you should not be discouraged. It is an interesting game we are playing and I love it. The greater the problem the more fun we have in solving it. We have yet several years ahead of what I must call a reconstruction period and let's see who will be in the ranks when they are reformed. I am fighting with you and hope to be in at the finish but I warn you now that you have to be good to stand up under the present strain.

"Do not forget that cotton manufacturing in these Southern States has certain world advantages to both capital and labor, and will be here carrying on when we are under the sod. It is our duty to do our best by it while we temporarily have it under our care. Some day in the ordinary course of events we must pass our responsibilities on to others so let's keep our feet on the ground, our brains constantly at work and most important of all, keep well in mind these thoughts: Our competitors are our associates and we can never get ahead by destroying others."

Engineers Advised to

Cooperate with Finishers

at A.S.M.E. Meeting

THE value of close cooperation between textile finishers and mechanical engineers was emphasized by H. M. Burke, of the Dutchess Bleachery and chairman of the Textile Division of the American Society of Mechanica Engineers, at the meeting held in Greenville, S. C., Wednesday of this week by that division, under the auspices of the Greenville Section and with the Charlotte Section cooperating.

Mr. Burke spoke of the meeting of southern cotton finishers held in Greenville the previous day and stated that at that meeting there had been born, or possibly reborn, a southern section of the National Association of Finishers of Cotton Fabrics. He believes that a liason between that group and the A.S.M.E. would be of value and that the engineers could help in giving engineering data to the finishers.

This statement was of particular interest since the finishers' meeting on Tuesday had been a closed one and no official statement had been given out regarding its results. However, it had been understood that the purpose of the meeting was to effect closer cooperation among textile finishers in that section.

Humidification Paper Discussed

Harry D. Learnard of the Pacific Mills, Lyman, S. C., presided at the morning session of the A.S.M.E. meeting, at which two papers, printed on the following pages, were presented.

Following the address on "Humidification of Textile Plants," by E. D. Smith, of J. E. Sirrine & Co., Greenville, W. B. Hodges, of Parks-Cramer Co., emphasized the necessity of continuing care being given to humidifying equipment. He also referred to the cooling which can be secured by additional evaporation, and stated that if we balance the evaporation of water against the heat produced by the machinery, etc., we can obtain a very decided reduction of temperature.

James W. Cox, Jr., vice-president of a group of associated mills in Augusta, Ga., precipitated an interesting discussion when he asked for opinions as to the best moisture content for roving when it leaves the card room. After remarks by Mr. Hodge, Frank B. Comins and W. M. Tralton of the American Moisting Co., and J. A. McPherson of J. E. Sirrine & Co., it seemed to be the consensus of opinion that conditions differ in different mills, but that the moisture content of cotton should increase gradually as it progresses through the various stages of manufacture; that the best results are secured when the humidity in the roving room is slightly higher than in the carding room; and that there is an opportunity for research work to determine the optimum moisture content of cotton in the various steps through the mill.

Discussion of Water Treatment

The paper on "The Treatment of Water for Bleaching and Dyeing," by C. D. Blackwelder of J. E. Sirrine & Co., was read by Mr. McPherson in the absence of Mr. Blackwelder. During the discussion, it was brought out by M. C. Ellison, of the Grinnell Co., that the corrosive effect of some water upon pipings and fittings is quite a serious factor and that often in old plants it is found that pipes have been practically closed up by such corrosion.

As J. E. Sirrine was unable to attend the A.S.M.E. banquet in the evening, D. J. Kerr, general superintendent of the Champion Fibre Co., Canton, N. C., and chairman of the Greenville Section, acted as toastmaster.

Wm. E. Mitchell, vice-president, Georgia Power Co., drew a graphic picture of the part which electrical power development has played in southern industrial development. He predicted that the bulk of power increase in the future will come from steam.

L. W. Wallace, executive secretary, American Engineering Council, spoke on "Engineering in Industry and Government." H. H. Burke and James W. Cox, Jr., present and past chairman, respectively of the textile division, spoke briefly.

Golf prizes were awarded to Prof. S. B. Earl and Earle Mauldin.

A.S.M.E. Papers on Humidification and Water Purification

IMPORTANCE of textile-mill humidification and treatment of water for bleaching and dyeing was emphasized at the Southern Textile Meeting of the American Society of Mechanical Engineers, held in Greenville, S. C., Oct. 22, 1930. Discussion of the effect of humidification in cotton textile manufacturing in relation to increased production, elimination of waste, and improvement of working conditions was led by E. D. Smith, engineer, J. E. Sirrine & Co. Results of using impure water and inadequate water-purification plants in bleaching and dyeing establishments were pointed out in a paper by C. D. Blackwelder, who is in charge of chemical engineering operations of the same company.

Speaking of the value of modern practice in humidification, Mr. Smith said in part:

Modern Humidification Practice

Humidification of textile plants is no longer guesswork or approximation, but has become a problem of exact science. In the last five or six years there has been a great deal more thought and study given to humidification than ever before, particularly that part in the lowering of temperatures. Today, modern humidification not only maintains a constant relative

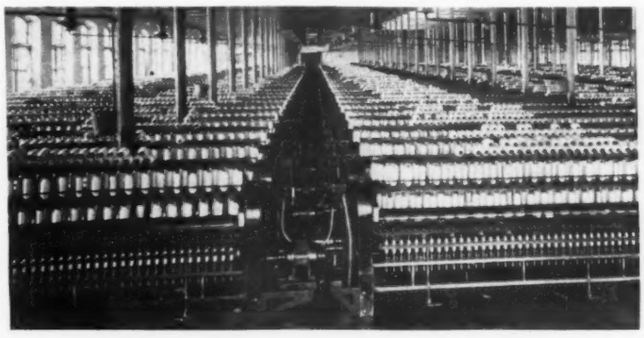
humidity, but it also washes the air and introduces fresh air through open windows. By this process a more uniform temperature is maintained in the room, which is most beneficial to the health of the employees.

In designing a humidification, or in a broader sense, an air-conditioning system, there are two major factors to be considered: (1) correct relative humidity, and (2) temperature that is most beneficial to the health of the employees. The correct humidity is that percentage of relative humidity under which best-running work is obtained. This percentage of relative humidity varies according to the quality and type of cotton, construction of goods, and speed of machines.

There are certain departments in a cotton mill that generate a great deal of heat; i.e., spinning, twisting, and weaving. Naturally a spinning room is hotter than a weave room, for more frictional heat is generated by the frames. For instance, in a motor-driven sheeting mill there are about five times as many B.t.u. generated in the spinning as in the weaving process. Now to eliminate this heat there are four fundamental ways: (1) by direct cooling or removal of the heat, (2) by evaporation of water by the heat generated by the machines and employees, (3) by air circulation, and (4) by reducing the moisture content in the air.

A manufacturer, before spending the money on a modern air-conditioning system, wants to know what he will receive from it, especially as the condition of the textile industry as it is today is not of the best. He will first ask: "How much more will I make?" Or he may ask: "How much less will I lose?" No two plants are exactly the same and each one should be given careful study, but generally the manufacturer will benefit by increased production, better running of work, more uniform work, elimination of large amount of waste, maximum speed of machines, increased moisture content, better working conditions, and minimum number of employees.

The actual saving in money will naturally vary according to the physical condition of the mill. About two years ago the humidifying systems in two mills were revamped, that part of the equipment that could not be used was discarded, the remainder supplemented to conform with modern practice; both mills were manufacturing print cloth. The first mill had 50,000 spindles, the second 70,000; and they used 12,000 and 16,000 bales of cotton respectively a year. The equipment in the first mill was about sixteen years old but was kept in fairly good condition; the equipment in the second mill was older and had never been given proper attention. After these systems were revamped, the first mill used over a bale of cotton less a week than before; and the second mill had such a large saving that it was enough to pay for the installation in a little over two years.



Modern cotton spinning rooms have carefully designed humidification systems

In another mill the humidifying system was revamped, and as it was in excellent condition, only sufficient additional equipment was added to modernize it. In checking over the system before and after the installation of the additional equipment, a very interesting feature was noticed: The mill was on fine goods and was running with a relative humidity of about 54%; the humidity was raised to about 60%. Before increasing the relative humidity, count was made of the "ends down" for several weeks, which averaged 60 per hour on 10,000 spindles or about 40 frames. After the new equipment was installed and regulated, the average of "ends down" on the same frames was 20 per hour. This one item alone of preventing yarn breakage was well worth the cost of modernizing the system.

The majority of mills having air-conditioning systems installed over six years, that have not been revamped since the installation, are decidedly deficient in humidity and regulation; and money invested in bringing the system up to modern standards will be well spent by increased production and by obtaining a better product.

Many systems installed in textile plants which have come under the author's observation, have been found after a year or two to lack the proper supervision, and naturally the best results are not obtained. In some cases, the mill management has discarded equipment in use and purchased a new system of another manufacture, believing that the deficiency in relative humidity of the first system installed was due to the make and type, whereas the basic reason for inadequate humidity was failure on their part to care for the equipment properly. If an inspection of the system is made by a textile engineer or one from the company making the installation at least every six months, or preferably four times a year, and a report made outlining the physical condition of the system with recommendations as to the amount of relative humidity to be carried, the best results will be obtained at all times.

Importance of Suitable Water

Mr. Blackwelder's paper in his absence was read by Mr. McPherson. In outlining the importance of suitable water in bleaching and dyeing and results of using water-treatment plants of faulty design, the paper stated in part:

Of all the raw materials entering into washing, scouring, bleaching and dyeing processes, water is by far the most important, since it enters every stage of the operation, either as a vehicle for the chemicals used or as a solvent for the impurities which have been removed. The difference between the results obtained in two different bleacheries is often due largely to the difference in the composition of the water.

Most textile men are familiar with the usual type of filter plants found in connection with the textile plants that were built prior to six years ago. Since that time many changes in the design of the plants and the application of chemical treatment have been made. The design of the filter beds and operating controls has gone through a period of improvement.

The average filter plant produces water that is practically free from turbidity and suspended matter, and the water is fairly clear and sparkling. Due to the physical appearance of this water, it is rarely suspected of causing trouble in the processing of the goods. Frequently goods are damaged to a greater or less extent because of certain minerals and colloids being left in the water, which are not visible to the unaided eye. Sometimes the raw water supply is polluted with sewage and wastes, and although the water is clarified, certain harmful elements have been left in the water. Spore-forming bacteria also may be present in the water, which are hard to destroy and often give trouble in the bleachery by producing stains, peculiar odors, and moulds.

A very small amount of suspended matter will cause trouble in a bleachery when the water is allowed to circulate on the cloth or yarn. It will cause a precipitate which results usually in a brownish stain. Iron in its various forms is one of the greatest sources of trouble in water supplies.

In a great many cases in textile mills dyers blame their dyestuffs and chemicals for causing uneven dyeings, when really the trouble is in the quality of the water. With a properly treated water supply, many stains can be eliminated, and a reduction in the quantity of chemicals used in processing the goods will be made.

Water with excess hardness should not be used for bleaching and dyeing. Hard water is not as good a solvent as soft water. It causes secondary reactions with the chemicals used in the various solutions, with the result that more chemicals are required in the processing of a given quantity of

goods. Unsatisfactory results from the use of hard water are seen more often in the kier boiling than anywhere else in the bleach house. Calcium and magnesium salts form insoluble compounds with the alkalis and soap compounds used in boiling. These insoluble particles, if left on the fiber, become worked into the cloth and form a protective coating in spots which will not allow the goods to bleach properly. If the goods are dyed, these spots resist the penetration of the dye and cause light spots in the dyed goods.

There are many water-treatment plants in use today that are being called on to produce satisfactory water for processing, but great difficulty is being experienced in getting the quality of water required. Very few of these plants that are not functioning properly were designed especially to treat the raw water being handled.

Some of the plants that have come under the author's observation for study and report were producing water of such poor quality that a considerable amount of the goods handled in the bleachery had to be processed a second time. The production of delicate shades was impossible. Many of these hit-and-miss type of water-treatment plants were designed without sufficient mixing chambers in which the raw water and coagulant is agitated before passing through the stilling wall into the coagulating or subsidence basin. In nearly every case the retention period in the coagulating basin was too short, and the velocity through the basin too great. On checking up the cost of operating these plants it was found that the chemical dosage was excessive, which made the chemical treatment very expensive. Due to improperly designed coagulating basins and filter beds, the filter runs were short, which resulted in the use of a high percentage of the filtered water for back washing, thereby reducing the net output of the filter plant. Many of these plants are not provided with proper equipment for controlling the alkalinity and hydrogen-ion concentration of the filtered water. This is a very important subject and should receive proper thought by all owners of filter plants.

Water supplies for mills in many sections require careful treatment before use

Many of the so-called troubles in the bleachery and dyehouse can be avoided by proper treatment of the water supply. Proper study should be made of the particular water to be treated before designing a water-treatment plant. Full knowledge of the processes and the chemical reactions involved in the bleachery and dyehouse should be known before deciding the chemical treatment of the water. Many tests should be made on the raw water over a period of several months if possible. The tests should include complete mineral analyses, as well as bacteriological studies. Studies and observations should be made of the chemical dosage required, size of the "floc" formed by the coagulant, rate of floc formation and precipitation, nature of the colloids, turbidity and color removal, clarity of the water between the floc, and turbidity and color in the settled water. In addition to this, studies should be made of the corrosive properties of the water with a view of eliminating this evil.

After the water-treatment plant is built and the operators instructed in its operation, the plant must not be forgotten. The composition of the water in nearly all rivers and streams is changing constantly, due particularly to sewage and trade-waste pollution. This being the case, the filter-plant operators require the technical services of a chemical laboratory and instructions periodically.

Distributor Favors Higher Prices on Cottons

Sears-Roebuck Head Speaks at Chicago Meeting

"IT WILL be better for textile prices to go up, not down," said Robert E. Wood, president Sears-Roebuck & Co., before the Seventh Conference of Major Industries, University of Chicago, Wednesday, Oct. 22.

Mr. Wood's remarks on this point follow:

"A popular number in cotton goods—sheeting—sold in our 1909 catalogue for 3¾c. a yard and in the fall of 1930 it is selling for 9½c. a yard, after dropping from a peak of 21c. per yard in 1920.

"How was this price of 3¾c. reached in 1909? It was accomplished by almost peon negro labor in the cotton fields and by raising the raw material on farm land which had a negligible value, a value so low that taxes were insufficient to provide proper schools, roads or other facilities. The raw material that went into that sheeting was made up in mills where the cheapest of immigrant or native labor was employed at almost starvation wages.

"Today, both the field worker in cotton and the mill worker have low wages and a low standard of living when compared with the rest of agriculture and industry, but at least both have greatly improved their condition in the last 20 years. Now where are you going to get the deflation in the textile industry? A reduction in selling price cannot be taken out of profits because there are none for the grower, or the mill owner and very little for the merchant. Any deflation has to come out of wages. Yet I doubt whether any responsible man wants to drive the investor into bankruptcy and to drive the field and mill worker back to the standards of 1909.

"In this case, it will be better for prices to go up, not down."

✦

Coming from a large buyer of textile products, these views suggest an aroused public sentiment that favors better humanitarian conditions even at expense of higher prices.

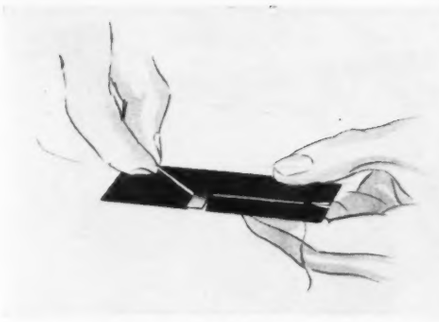


Fig. 3. A piece of black paper with slits to hold the rayon allows one to count the number of filaments

Fig. 1. Making a photomicrograph of a cross section of rayon

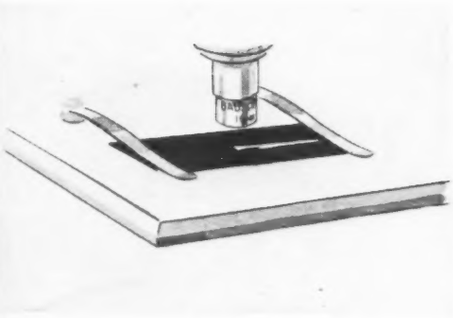


Fig. 4. A magnification of 50 diameters facilitates the counting of filaments in rayon

Making Rayon Cross Sections in Three Minutes

By Ken G. Niblack

THE boss asked for cross-section specimens of rayon. He said he would like to have photographs taken of them. I had never made a cross section of rayon, but it promised to be an interesting job.

After rummaging through all the available textile books which describe the methods and equipment usually employed to cut a specimen of rayon, I decided that there must be some easier way to achieve my purpose. I made several starts with paraffin and pigment. These experiments showed me that the rayon fiber was like a little tube and that light would travel up through it for a considerable distance; therefore an extremely thin specimen was not necessary.

The thought came to me that perhaps if I could hold fibers in a slit in a piece of paper, I should be able to examine the top section. I tried this with a piece of heavy writing paper, and it worked surprisingly well; and I see no reason why this method should not be satisfactory to the textile man who would like to study the cross sections of rayon for determining the type of rayon or for determining the density of a yarn.

I procured some black paper that was quite a bit heavier than writing paper. I cut this into small ½-in. squares and cut a slit in each square about ¼ in. long. Into this slit I pulled the fibers, cutting them off about ⅛ of an in. on each side of the paper with a pair of scissors.

It happened that I wanted to save my specimen for photographing if it proved to be good enough; and therefore I fixed these slips of paper onto a microscope slide with rubber cement. After they had sufficient time to become well set, I cut off the fibers protruding from the top of each piece of paper with a new safety razor blade. I tried sawing the fibers off and chopping them off, and found that chopping them off was the better method. Another thing, I learned was that it was best to go just under the surface of the paper in order to be more sure of cutting the fibers off at the same length.

I should judge it took me about three minutes to make one specimen after having all my materials ready. This seems to me a considerable saving in time over the usual procedure. I used Bausch & Lomb FFS-7 microscope. For observing the specimen I used the 43X-objective and a 5X-eyepiece; but for photographing I used the 10X-objective and 20X-eyepiece, since these gave better depth of focus. Either combination gives about 200-diameter magnification. Of course, I always located my specimen with the lower-powered objectives first.

For taking pictures I arranged a Bausch & Lomb H camera with shutter and observation eyepiece, as shown in Fig. 1. I found that the ribbon-filament microscope lamp required only about a half-minute exposure of the plate. The photographic results were not as gratifying as the visual, but in many cases photographic records as shown in Fig. 2 are of the value.

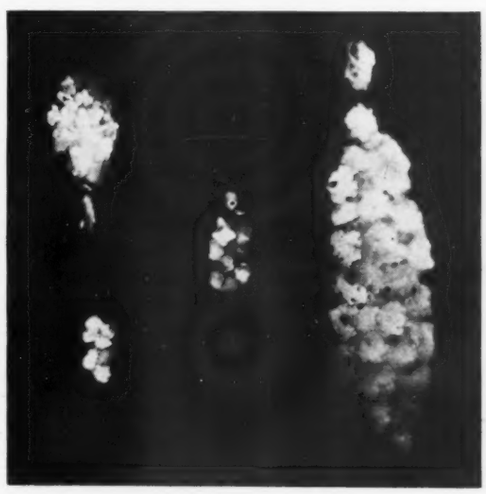


Fig. 2. Photomicrographs of rayon cross-sections made by simple method described in accompanying article

The same sort of black paper can be used for counting the number of filaments in rayon yarn, cutting a slit in one end and two slits at right angles to this in the center as shown in Fig. 3. This method separates the filaments and draws them tight. It does not break the filaments, but holds them firmly in a plane suitable for microscopic examination (Fig. 4).

Wool Lace Vogue

Makes 1930 Boom Year for Lace Industry

WHATEVER unpleasant memories 1930 may leave behind for most textile manufacturers, there is one division that can regard the year with eminent satisfaction; namely, the lace mills. To lace manufacturers, 1930 is proving a boom year, which is particularly gratifying in that it follows nearly a decade of lean business. A revival of feminine styles brought lace back very strongly last winter, and this vogue had not had time to wane before another significant vogue—the wool lace fashion made its appearance. The demand for wool lace jumped up with the rapidity characteristic of such styles, and has grown so important during the last three months that now it represents a foremost outlet for lace fabrics. Wool lace finds itself established for the season, with a future as definite as anything can be in these days of quick style changes.

Wool lace sales at present run into big figures; about 15% of all lace machines in the country are now on this line, the output totaling 100,000 yards weekly. Buying is firm, considering the general hesitancy, and the market is steadily widening. At present writing, silk lace demand also has increased, and mills are hard pressed to fill orders; indeed, it might be said that this trade is suffering from an embarrassment of riches.

Paris Started It

Wool lace first excited attention in early summer when Chanel, the well-known Paris designer, featured this fabric in dresses and blouses, both made of French wool lace. This tied up with the growing style importance of wool fabrics, both tweeds and knit goods. Then Hattie Carnegie, American designer, showed wool lace models, made of domestic lace, and within a few weeks, lace manufacturers found themselves flooded with orders. Production of wool lace in domestic mills was accelerated in July, but was impeded by production difficulties. Wool lace, it should be explained, is a silk-and-wool fabric; there is no 100% wool lace; recently mills have tried to widen the market at the low-priced end by producing some wool-and-cotton lace, but the output is small. For wool lace, the mills use French spun worsted yarn, fairly heavy warp twist, counts 2/30s to 2/40s. The chief difficulty at the start was to get enough of this yarn. Spinners did not make the particular twist required; and the shortage of yarn held back wool lace production for some weeks; by September, however, spinners were producing large quantities, and now lace mills have no difficulty in getting supplies.

Mechanical problems involved in adjusting silk lace equipment to the production of wool lace, were not serious; but the preliminary work did involve numerous costly experiments. Wool lace is made in similar construction to the finer silk laces; demand is mostly for high-grade wool lace, which explains why manufacturers have not tried producing wool-and-rayon lace. The production of wool-and-silk lace is smaller per given motion than is the case with silk lace; it is estimated that machines produce only 60% wool-and-silk lace, as against 100% output of the staple silk line.

When they started the new line, manufacturers found they could not use wool on bobbins, so they adopted special beams for the wool, and employed the finest quality of Italian thrown silk on the bobbins. The machine set-up for wool otherwise is identical to the silk

lace set-up. Manufacturers had few designs for wool lace available at the start, so they duplicated their old silk lace patterns, the difference being that they used wool yarn on special auxiliary beams on the machines, these beams taking place of the old beams used for rayon when silk-and-rayon lace was produced. The installation of the special auxiliary beams permitted a quick switch from silk lace to wool lace.

Styling and Merchandising

Demand for wool lace at first cut decidedly into the demand for silk lace, but now the latter is being sought for formal winter dresses and producers report active demand at both ends. At the silk lace end, there is emphatic interest in Chantilly. Lace manufacturers are in a strong position on orders. Buyer preference covers a wide range of designs. In July, the manufacturers produced only the floral types favored in silk lace, but now wool lace is available in geometrics as well; eyelit effects are important, as are several distinctive polka dot patterns. The mills expect geometrics to dominate in Palm Beach sports fabrics; already there is good demand at this end. The new geometrics have very few openings, being almost as substantial as a knitted cloth. Prevailing colors include black, wine tones, cricket green, manilla brown, beige, and nature. There is a tendency to darker shades for the Northern states and pastels for Palm Beach resort wear; one of the newest colors is "Doudon Red," named for Capt. Dieudonne (Doudon) Coste, transatlantic flyer; there is also a rust color.

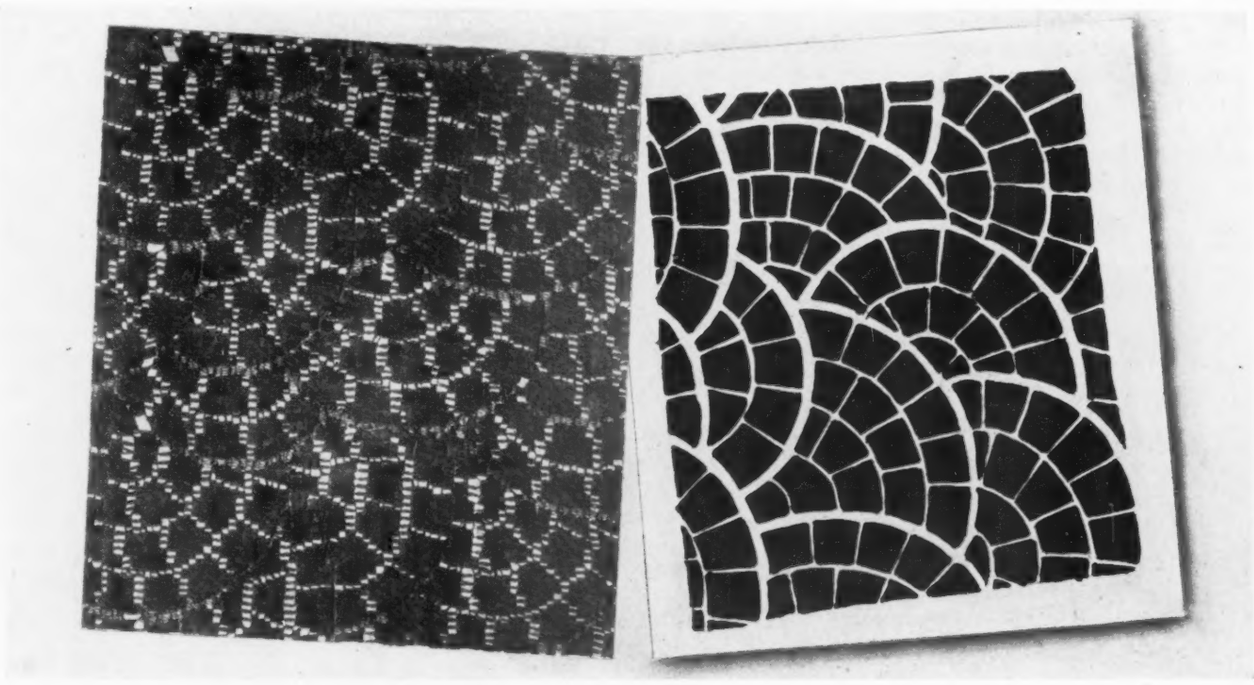
Wool lace went big in street dresses at first, and is still favored for these garments, being used also for holiday and sports dresses. Widening of the market made wool lace popular for blouses, to be worn with tweed suits, now very much the vogue; blouse colors include nature, cream, white, and beige. Sportswear naturally suggested itself as an outstanding market, but the arrival of the vogue at the end of the spring season prevented immediate exploitation of wool lace for sports. Now, however, this lace is being actively promoted at this end, and manufacturers report a growing demand from makers of outdoor apparel. Wool lace also is used for neckwear, trimming, and part-bodies of dresses, to a considerable extent; also for crowns and brims of hats and for underwear. The range of designs is rapidly widening, but even now it is limited by mechanical problems. At first, available designs were so few that one foremost company was producing 30% of its wool lace output in one pattern.

Wool lace prices are firm; increased output brought a slight recession a month ago, but growth of demand steadied the market later. All orders are of good size, and there is some future buying. Wool lace is essentially a quality proposition with the blouse market a growing outlet. Blouses made of this fabric retail for $10 to $12, and dresses from $25 upward. Manufacturers see the blouse demand as most promising and expect it to outlast the vogue for wool lace dresses.

Asked regarding the availability of rayon yarn in producing wool lace, manufacturers said the emphasis on fine texture in wool-lace fabrics made rayon impracticable, adding that dull finish also is important and that rayon is too lustrous, silk being found more to the purpose. Wool-and-cotton lace presents somewhat similar problems, so far as daintiness and delicacy are concerned. Mechanically speaking, rayon or cotton can be used as easily as silk in producing wool lace.

Lace Trade's Good Year

Commenting on the excellent year enjoyed by the lace trade, C. B. J. Molitor, secretary of the American Lace Manufacturers Association, said: "Experiences, mostly unfortunate ones, have made the industry very responsive, very quick to meet a new style, and to adjust equipment to produce what may be wanted. Previously, manufacturers were too conservative; now they have their ears to the ground and can make an almost overnight change, as soon as style variation demands it. That's why they are doing so well just now with both silk and wool lace."



Popular pattern developed in wool lace and the designer's original sketch for the pattern.

The Center Filling Stop Motion

Does Not Require Im

by the Fixer

By B. F. Hayes

MANY woolen and worsted loomfixers have attempted to improve the center filling stop motion. In most cases the object in such attempts has been to give greater leverage to the knocking-off mechanism. In my opinion, a larger amount of leverage is not required, although I realize that many disagree with me on this point. I base my opinion on many years of study, and I have reached the conclusion that no mechanical improvements are necessary to make this motion stop the loom on every pick that is incomplete. If properly adjusted, it will stop the loom every time the filling breaks or runs out; and mind—I do not specify that the filling must break or run out before reaching or before passing the filling stop motion. With the correct adjustment, it will only very rarely stop false.

Lack of Understanding

It is rather amusing, or would be amusing, if it were not so very costly, to note how few of these filling stop motions have not been "improved" by the fixers. One of the best fixers I have ever known used to believe it necessary to add a piece of wire to this motion in order to prevent tearing of holes in the cloth. This wire was one of his favorite contraptions until a second hand in the Wood Worsted Mill, at Lawrence, Mass., told him that he would permit no so-called improvements of that sort. This second hand, by the way, found that he could not himself prevent the tearing of holes in the cloth, although he worked on the problem from dinner to five o'clock.

Wires Must Have Proper Latitude

I was called in on the particular case referred to, and found that the casting on the breast beam was set too high, with the result that it would not allow the feeler wires to go down deep enough in the slot. The wires had so short a distance to move before reaching the cloth, that they arrived before the lay was sufficiently far back to allow the wires to clear. It required only ten minutes to find the cause and apply the remedy, using no special contraption. It do not wish to imply that I and I alone know the working parts of the center filling stop motion thoroughly, but this incident is a typical example of the lack of understanding regarding this motion which is so prevalent.

Even the weavers are inclined to expect the fixer to design a special attachment to be applied to this motion. I well remember the strenuous objections raised by one weaver when, on first tackling his looms, I threw appliances of this sort by him out of the window. When I had completed the job, this weaver told me that he had never before seen a loom which would stop when the filling ran out or broke after it had actually passed the stop motion.

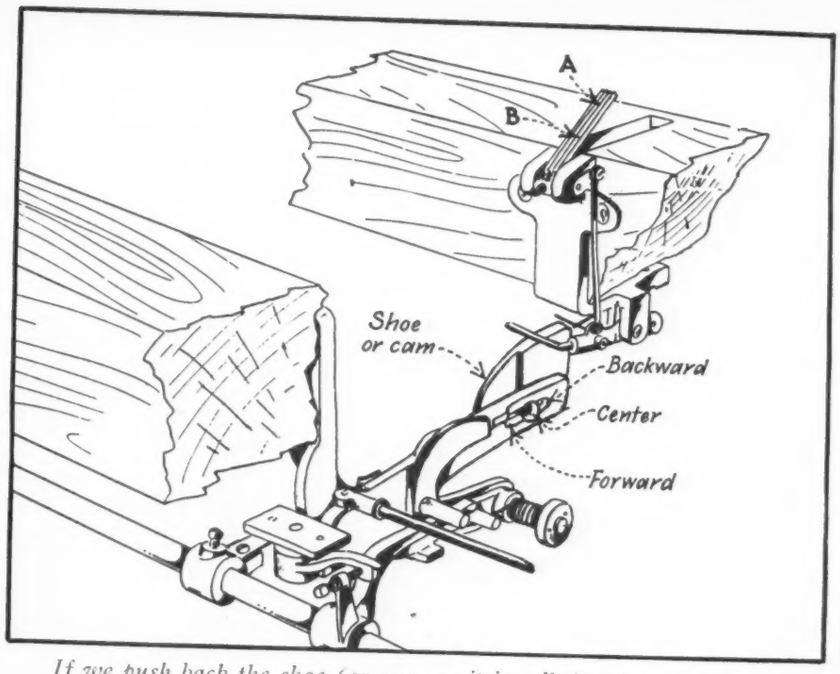
Another mill in which I accepted a position as loomfixer was making a ten-harness 4/1 sateen with a filling of about 1/25s worsted. The looms were 72 in. in reed space and were weaving a cloth 60 in. wide. The weavers found they could use no drag in the shuttles. The trouble was due to the shoe of the filling stop motion being set as far forward as possible; and the result of this condition was that 90% of all the filling stop motions in the mill were out of order. I set the shoes for this grade of work as far back as possible, and found the problem solved.

Cotton looms must also have well adjusted stop motions

Regulating Pressure

New filling stop motions as received from the C. & K. shop are all equipped with a spring for regulating the amount of pressure placed on the filling by the feeler wires. If our filling is coarse, we require more pressure

provement



If we push back the shoe (or cam, as it is called), the feeler wires will bear on the filling at point A. This is all right for a satin weave. When we place the shoe or cam forward the filling is caught by the wires at point B. This is the place for a cotton weave. Notice the leverage at point A as compared with point B.

than if it is fine. The spring is equipped with an adjusting screw for adjusting this pressure. The position of the shoe also governs the amount of pressure on the filling, because upon the shoe depends the part of the feeler wires which is to touch the filling. Therefore both the adjusting screw and the shoe must be considered in applying the pressure. If our wires catch the filling near the outside end, the pressure is light; but if they catch it near the base, the pressure is much greater.

Cloths require different pressures in accordance with the tightness of the weaves. The plain or cotton weave requires more pressure than any other. Shedding early requires more pressure than shedding late. The pressure should be so adjusted as to carry anything less than a complete pick of filling down into the slot and so stop the loom. Excessive pressure may make filling kinks in the center of the cloth if it is not relieved in time.

The pressure spring to which I refer is one very important part of the filling stop motion, and no motion can work up to 100% efficiency without it. There are, however, thousands of looms running without this spring.

At one time the springs were not placed in the loom properly. The adjusting screw very often came out and was lost. This resulted in the spring being too powerful. Very often in such cases the fixer, instead of replacing the lost adjusting screw, employed a very much weaker spring, often making it from a feeler wire. A feeler wire is not powerful enough, and yet there are probably more C. & K. looms working with feeler wires than with the regular springs. When the regular spring is used, none of the contraptions which I have mentioned are required. The springs, as I recall, cost only 5c. per dozen, and one broken pick passing the filling stop motion costs the equivalent of enough springs to supply about thirty looms for twenty years, with proper care.

I recall one overseer who insisted that I use feeler wires instead of the springs. When I objected, he told me to use two feeler wires. Two are better than one, but are not as good as the regular springs.

The newest looms are built with the adjusting screws fastened in position by a lock nut, and hence these do not come out and get lost as formerly. Another new improvement is a hump on the main casting of the filling stop motion, which is designed to relieve the pressure slightly when there is no danger of a broken pick being allowed to pass. This hump makes possible using more pressure without forming filling kinks in the center of the cloth.

On cotton weaves we can obtain enough pressure from the spring alone, unless we are shedding very late and our filling is light. In the latter case we must bring our shoe forward to give the feeler wires a larger leverage by catching the filling nearer to the base of the feeler wires. Of course, if our cloth is narrow and our looms are wide, we cannot use as much pressure as if the cloth were filling up the reed space. Now if we change our weave to a twill, we must set back our shoe; otherwise our feeler wires would have too much leverage and would stop the loom when the filling is not missing.

As I have already said, if we shed early, we must have either more pressure or more leverage than if we shed late, because when shedding early our warp threads clamp on to the filling, making it more difficult for the feeler wires to carry down into the slot any filling which is slightly less than a complete pick. When shedding late, we cannot use the same amount of pressure without stopping the loom falsely.

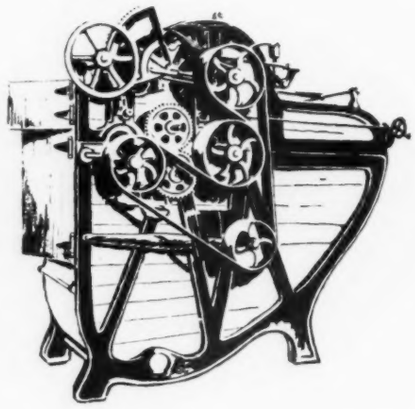
We often ask this filling stop motion to do more work than it was designed to do. If we try to do by hand the work which the filling stop motion is supposed to do in stopping the loom, and find that we cannot relieve the brake in such manner, we can hardly expect the delicate filling stop motion to do it. The brake rod should move easily. The cam on the brake rod should be set as close to the shipper handle as possible to permit quick moving of the handle.

Some filling stop motions are so designed that the shipper handle can be relieved before the brake is relieved, but I have not seen this arrangement many times. I believe that this is a good system and that the shipper handle should be relieved before or at the same time the brake is relieved. In most looms the brake is relieved first, and the shipper handle is relieved by the brake rod as it comes up.

Scientific Investigation Ends Trouble in

Fulling Low-Grade Woolens

By Herbert C. Roberts



MANY times a finisher of woolen goods—especially the less expensive class of fabrics—runs into perplexing problems of what to do when the fulling soap breaks down or "turns to water." Often the first step taken to overcome a difficulty of this nature is to increase the concentration of the soap and alkali. This procedure sometimes solves the problem, but in many instances does not improve the conditions. Frequently a change in the source of supply of the soap is made, with the hope that this will eliminate the difficulty.

While these experiments and changes are going on, the trouble may disappear. This may be due to some change in the stock or some modification of the method of manipulation. But if the trouble clears up after the substitution of one make of soap for another, the soap previously used will, no doubt, receive the blame. From that time on the statement will be made, "We had trouble with Blank soap, but when we changed to another brand, our troubles all disappeared." In other words, the vendor of the soap used originally is put on the blacklist.

Soap Not Always at Fault

If a scientific investigation is made each time a problem of this nature confronts a finisher, the real cause of the trouble will generally be found to be something other than the soap itself. In almost every case where the trouble is run down scientifically rather than by a hit-and-miss method, the answer is obtained in less time, at a lower cost, and with the production of a smaller amount of inferior merchandise.

Recently we were afforded the opportunity of making an investigation in a mill where they were having trouble in finishing a 32-oz. mackinaw cloth. As soon as the pieces were soaped down in the fulling mill, it was noted that the soap liquor had lost its body or "turned to water." Under ordinary circumstances this should not have happened, because the soap was a high-titre product and the bath was made up with 4.6 oz. of soap and 4.6 oz. of soda ash to the gal.

Obviously there was something in the stock which was causing this trouble. Samples of the yarn were picked out of the warp and the filling, and these were tested separately for foreign substances. The ash of these stocks was no more than the usual percentage. This would indicate that there were no impurities, such as lime or stripper, left in the goods. A further check made by running an analysis of the ash showed the presence of no excess of metallic salts.

An ether extraction was next made, and this indicated that the stock had been oiled with a non-emulsifying stock lubricant. There was over 10% of this oil in the stock. Further investigation showed that this stock was an odd lot of shoddy, which had been purchased at a low price without regard to oil quality or content. Herein lay the trouble. Since the oil on the stock was a non-emulsifying mineral oil, the entire amount of soap was being used to emulsify it; and only the watery emulsion was left in the goods.

With this information at hand, the problem became one of removing the oil before the goods were fulled. Removal of the oil could be accomplished by scouring the fabric in the washer before it was put in the fulling mill. However, it tied up production to scour the goods before fulling, since the number of washers was only sufficient to take care of the pieces as they came out of the fulling mill.

Novel Method Proposed

A novel method was proposed, tried out, and pronounced most satisfactory. It consisted of soaping the goods in the fulling mill as heretofore done and running them a little wetter than usual. They were run in the mill without weights for 15 min. The fabric was then taken out of the mill and hydro-extracted as dry as possible. This treatment loosened up, emulsified, and threw out the oil and grease in the goods. The pieces were placed back in the fulling and soaped again. During the second soaping there was no breaking down of the soap because the oil had been eliminated. This method was used until all the stock which gave the trouble had been consumed. After this, the regular method of fulling and scouring was resumed. That is to say, the goods were soaped in the mill with the regular amount of the same soap, and no breaking down of this soap was noticed.

If no investigation had been carried on as to the cause of the trouble, different experiments of the cut-and-try order would have been made until the stock was all used up. When the new stock came through, whatever change had been made in the formula on the new lot would have received the credit for eliminating the trouble. This changed method might have required a long and costly operation, but no doubt it would have been adopted as standard.

New D-13 Specifications Cover Rayon *and* Humidity

ADOPTION of tentative specifications covering the measurement of relative humidity and revision of the methods of identifying rayon and synthetic fibers were among the important items of business transacted at the fall meeting of Committee D-13 of the American Society for Testing Materials, held in Boston, Oct. 16 and 17, at the Massachusetts Institute of Technology.

Prof. H. J. Ball, chairman, D-13

Thursday morning, Oct. 16, was given over to sub-committee meetings. Sub-committee B-1, Section 3, which dealt with the problem of humidity was particularly well attended and discussion was general.

Following luncheon at the Walker Memorial of M.I.T. the group boarded buses and spent the afternoon visiting the Salem plant of the Naumkeag Steam Cotton Co. where they were royally entertained by J. Foster Smith, agent. The banquet Thursday evening took the form of a shore dinner at Marblehead. A varied and entertaining program was presented and many were called upon to do their best in the art of speechmaking. C. L. Warwick, secretary of the A.S.T.M., outlined some of the work of the central organization and the problems which they are facing.

Psychology and Employees

J. Frank Morrissey, superintendent of the Interlaken Mills, Providence, R. I., was the speaker of the evening and he chose as the topic of an interesting and informal talk the factor of psychology in dealing with employees. Mr. Morrissey's theme was that it was necessary to talk to the workers in their own language and he particularly recommended the use of pictures and symbols. R. H. Brown of Parks-Cramer Co., chairman of the entertainment committee, served as toastmaster.

The general meeting Friday morning was opened with a few remarks by Professor H. J. Ball, head of textile engineering department, Lowell Textile Institute, who, as chairman of D-13, outlined the activities since the last meeting. Prof. Ball also reported on the meeting of the advisory committee at which discussion had centered about the arrangement of papers to be presented at future meetings and, in particular, for the annual meeting of the A.S.T.M. to be held in June, 1931. It was decided that members, as individuals, present any thoughts they might have in response to the request of the Textile Foundation for suggestions. Need for action on some of the tentative specifications was stressed. Dr. S. W. Stratton, representing M.I.T., welcomed the meeting and assured the group of continued cooperation.

Accepted Committee Reports

Following is a summary of sub-committee reports which were read and accepted:

A-1. Sec. 1. Cotton Yarns and Threads. R. H. Adams, chairman. Plans for survey of field and revision of tolerances, tensile strength and elongation. Further report at March meeting.

A-1. Sec. 4. Tire Fabrics. B. H. Foster, chairman. Report of progress and plans in drafting specifications for double and single enameled duck; revision on chaffer tire fabric; specifications on leno breaker fabrics; investigation of strength correction factor for range of 5 to 7% regain.

A-1. Sec. 5. Hose and Belt Duck. B. L. Whittier, chairman. Proceeding on working specifications for hose duck. Belt duck to be taken up later.

A-1. Sec. 6. Narrow Fabrics. F. S. Mapes, chairman. Consideration of specifications for seven electrical cotton tapes. Cotton and silk tapes to be taken up at next meeting. Question of proper method of determining alkilinity and acidity brought up.

A-2. Sec. 2. Rayon Yarns. A. M. Tenney, chairman. New methods of identification of rayons which have proven workable were substituted for the previous methods.

A-2. Sec. 2. Rayon Fabrics. It was announced that Alexis Sommaripa, Dupont Rayon Co., had accepted the chairmanship of this committee.

B-1. Sec. 1. Methods. W. D. Appel, chairman. Consideration of variations in some physical methods of testing along with D-39. Tentative methods of tear tests and coordination with D-9 on this item. Recommended conducting filling tests so that all tests should not be made on same filling bobbin and definite statement of initial load in elongation tests.

B-1. Sec. 2. Machines. H. J. Ball, chairman. Tentative specifications for abrasion tests were considered. Decision that tests be conducted on different installations of abrading machines for the purpose of determining the variation from operation of the same machine and the comparability of results from different machines.

B-1. Sec. 3. Humidity. G. B. Haven, chairman. Considerable discussion took place on the tentative specifications for measuring relative humidity as worked out by the sub-committee. The specifications were adopted with a few amendments. One of the features is an allowable tolerance in standard atmosphere of 1% in relative humidity and plus 10 degrees in temperature.

Reports of progress were filed by J. S. McDaniel, chairman, A-6, Rope and Cordage; and by A. L. Brassell chairman, B-2 Nomenclature and Definitions. A. E. Davieu, chairman A-5, Sec. 1, Sugar Bags, reported that their work was done but acceptance had not been obtained from Calcutta. It was announced that the executive committee of the A.S.T.M. had changed the wording of the resolution dealing with cooperation with

(Continued on page 89)

OVERSEERS' ROUND-TABLE

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Discuss Stock Participation Plans for Employees

Editor, Overseers' Round-Table:

THE FACT that America's largest and foremost manufacturers have successfully adopted stock participating plans for their employees is conclusive proof of its merits. Such schemes tend to promote better good-will, encourage the employees to save, and enable the worker to participate in company profits.

The workman who is a shareholder becomes "management-conscious" and is stimulated to put forth his best efforts.

Stock participating plans, however, should be attractive to the employees. Stock must be offered below current market values, payment allowed on the installment basis and the amount purchasable yearly by each employee limited.

H. S. DEELEY.

On Visiting Other Plants

Editor, Overseers' Round-Table:

FROM WHAT I have seen, and heard, of overseers' visits to other mills I cannot say that I approve of them.

It seems that most mills are jealous of their knowledge, and experience, and do not wish to divulge any information on any of their methods of operation. I believe that an overseer can learn more from a good trade paper where he can ask any question pertaining to his business.

The attitude of most executives seems to be: If you (a competitor) spoil goods because you have not learned to overcome your troubles, why should I tell you? The more goods you spoil the less your chances of selling them, and perhaps I will get some of the business which you lose.

W. F. P.

Editor, Overseers' Round-Table:

I AM decidedly in favor of an overseer, or department head, visiting other plants so that he may see for himself how the other fellow does things.

A lot of things an overseer may do, and do right, but perhaps in a nearby plant the other fellow may be doing the same thing at less expense and with less trouble. Why not go over and see how they are putting it over? You may also have a chance to tell the other fellow how you do things. Therefore, I think occasional visits are very beneficial to all concerned.

"A SOUTHERNER."

Editor, Overseers' Round-Table:

MORE POWER to the Overseers' Round-Table. To my mind it is the most interesting page in the paper.

Trips to other mills by overseers are very profitable, both to the overseer and to his company. In my opinion, however, such trips should not be made more than once a year.

Some neighboring mill may be using a new type of machine or an attachment in a certain process. A trip to this mill, by the overseer concerned, would enable him to ascertain what was practical for his own mill. New ideas of handling stock, ingenious attachments to machines, and methods of operation by the help are things to be considered and learned. I know that such visits have been profitable to me and to other overseers visiting my department.

"CARDER."

Editor, Overseers' Round-Table:

PERSONALLY, I am in favor of visiting with other overseers. If I tried to run my job with just my own ideas and without assistance and the use of the knowledge of others I would just not be able to do it.

When I started to fix looms back in 1903, loom-fixers did not teach anyone. You had either to pay them to teach you or go out on your own. I did not feel that there was any one man who could teach all I wanted to know about loom-fixing so any time I could get two or three of the men together I started an argument and, in this way, learned what I wanted

Putting Over a New Idea to

"I CONSIDER myself fortunate," Superintendent Chase started the overseers' meeting, "in having a group of overseers who are frank to express their opinions and discuss any new ideas or methods which the company contemplates adopting, so I don't have to contend with plain bull-headedness which opposes anything that is new. However, many of your operatives have not had the advantage of your experience and are inclined to regard anything new with suspicion. I think we all might benefit by a discussion of ways and means of putting over new ideas to the employees. To be specific, if you were about to introduce specialization, or the so-called 'stretch-out' system, into your department how would you go about it?"

"That's easy," Bill quickly answered, "so easy, in fact, that I won't even go into my usual long oration. Just tell the operatives that they will make more money under the new plan if they are efficient. The dollar sign talks and no operative will admit that he, or she, is inefficient, so there you are.

"Bill is right," Joe agreed, "money talks. Convince the workers that they will make more money and your troubles are over."

"You sound like a pretty sour gang today," Pete laughed, "with your talk that nothing but money matters. However, I don't think it is as easy as you say. In general we were discussing 'selling' a new idea or method. Sometimes it means that the operative earns more pay, but sometimes it doesn't. Considering the 'labor-extension' plan in particular, the employee usually makes more money but that is not the point I would stress in talking with the help. I would go on the basis that they have an interest in what is going on and want to be told all about it. In telling them I would not talk figures and percentages but would show pictures and simple charts which would present in an easy way what we were driving at. I'd have several average em-

to the Operatives

ployees work under the new system for a time and then tell the rest what happened. In these days you can't get away with telling the workers that they will probably make more money. You have to show them just what work they will do under the new plan and exactly how everyone, both the company and the operatives will benefit."

"I think Pete has taken a lesson or so in psychology," Bill retorted, "and personally I think it is mostly bunk. The thing to do is to be tough. If the new plan allows the worker to make more money, tell them so and let it go at that. If it doesn't mean more money, tell them that it has to be done to meet competition and if they aren't agreeable someone else can take their place. I have just as much interest in humanity as anyone, but I don't see any sense in going through a lot of stuff that the workers don't understand."

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What do *you* think is the best method of "selling" a new idea or method to your workers?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

to know. I never saw two or more loom fixers together with a few drinks but that they started talking about loom-fixing, so I made it a point, particularly on Saturday after quitting time, to bring up anything I happened to have on my mind and get all their ideas about it. I then tried out all the suggestions the next week and worked over them until I was sure in my own mind of the correct method. In a short time I was considered as good, if not better, than any of them. I am sure that the same method would be useful to any and all overseers leaving out, of course, the drinks.

J. R. LIVINGSTON.

Opinion on Night Work

Editor, Overseers' Round-Table:

IN REGARD to the question on night work I think that, from a sound-business standpoint, it is advisable to work the machinery which a mill has as many hours as business will permit, rather than buy more machinery and invest money in a dead stock (because that is what the machinery amounts to when idle).

Of course, when business is slow there can be no question of working nights, but when a mill has plenty of orders there is nothing like night work to reduce overhead and the general cost of production.

As for the health of employees, we have state laws to take care of that. If night work were detrimental to the health of the worker the American Federation of Labor would not permit its members to work nights in the printing trade, etc.

J. MAUER.

Inventions Are Discussed

Editor, Overseers' Round-Table:

IN THE writer's opinion the mill has first right to an invention, regardless of whether the employee perfects the patented device on the job or on spare time. He must have access to the company's facilities to work out the invention and also he consumes quite a lot of company time. When an employee works out a labor-saving device he should bring it to the attention of the superintendent or manager. If the company desires to patent it, the right belongs exclusively to them. On the other hand, if the overseer finances the patent the company should have the right to its use in the mill and a share in any profits which might accrue from sales to other mills.

It has been my experience that where the employee plays fair with the company in matters of this kind he finds the management ready and willing to meet him more than half way.

S. M. K.

Editor, Overseers' Round-Table:

AN INVENTION to be patentable must, as everyone knows, pass the law's requirements for practicability, commercial usage, etc.

There are certain phases which one should analyze before deciding whether a foreman should humbly pass his ideas over to other parties. Provided the foreman uses his company's time and material in carrying on his development work, and further, receives his first conception of the idea from his firm, he should undoubtedly give them first opportunity of accepting the idea.

If the contrivance is such that it would demand more time and money than the foreman could afford he should take the matter up with the officials of the company. If accepted, and used, by the firm the foreman should receive a just reward, otherwise, there would be little progress in the realm of invention.

J. A. WEBB.

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Summary of Discussion on Who Should Control Patent Rights

The question was whether the individual or the company should control the patent rights on an invention which an individual perfected while an employee of the company. The answers, in contributions, are difficult to classify, due to the introduction of various provisos in most replies. In general, however, it may be said that opinion favored the company owning the patent rights where the invention was worked out during company time and with company materials, particularly when the company gave financial assistance in obtaining the patent. Under such circumstances it was believed that a suitable reward be given to the inventor by the company. Where the assistance rendered by the company was negligible the feeling was that the individual should have the patent rights but the company should have free usage. Mutual co-operation and fairness as between employer and employee were stressed.

NEWS about MEN

B. G. SLAUGHTER, president of Tubize Chatillon Corp., has been elected president of the Virginia Manufacturers Association for the ensuing year.

FERDINAND THUN, president of the Berkshire Knitting Mills, Reading, Pa., has just returned home after spending three months touring various countries in Europe.

FRANCIS H. DEWEY, president of the Queensbury Mills and GEORGE S. BARTON, president and treasurer of Rice, Barton & Fales, Inc., both of Worcester, Mass., have been elected councillors of the American Antiquarian Society.

W. B. CHARLES, president of W. B. Charles & Co., woolens, Amsterdam, N. Y., has been re-elected leader of the Republican committee in Montgomery county.

A. W. HIND, president of the Hind & Harrison Plush Co., Clark Mills, N. Y., has been awarded a gold medal for displaying the best exhibit at the recent International Stamp Collectors' Exhibition in Berlin.

JOHN A. LAW, VICTOR M. MONTGOMERY and R. E. BARNWELL compose the committee appointed by the Spartanburg, S. C., chamber of commerce to meet and entertain a party of 12 French cotton manufacturers, who will arrive in Spartanburg on Nov. 2 for a two-day stay.

JOHN E. BASSILL, vice-president of Tubize Chatillon Corp., announced Wednesday that FREDERICK C. NIEDERHAUSER, vice-president and general manager of Carolina Rayon Mills, Burlington, N. C., and formerly vice-president of Industrial Rayon Corp., had joined the technical staff of Tubize Chatillon Corp., as a consultant. Mr. Niederhauser will divided his time between this company and the Carolina Rayon Mills.

HENRY P. KENDALL, textile executive of South Carolina and Massachusetts, will place on free public exhibition in the library of the University of South Carolina, Columbia, S. C., the finest and largest collection of early southern and South Carolina maps in the South, in the opinion of scholars and connoisseurs.

United States Tariff Commission has announced the appointment, effective Nov. 1, of SIDNEY MORGAN of Ardmore, Pa., as secretary of the commission to succeed JOHN F. BETHUNE, recently appointed representative of the commission in Europe. Mr. Morgan comes from the office of the Secretary of Commerce, but for the greater part of his service with the government has been a staff member of the United States Bureau of Efficiency.

At the annual meeting of stockholders of Bibb Mfg. Co., Macon, Ga., the following directors were elected: SAMUEL B. ADAMS, W. D. ANDERSON, W. D. ANDERSON, JR., W. C. BRADLEY, R. CURTIS JORDON, MILLS B. LAND, W. B. MUIR, JAMES H. PORTER, B. P. ONEIL, E. W. STETSON, R. J. TAYLOR and D. A. TURNER. Subsequently the directors elected the following officers: W. D. ANDERSON, president and chairman of the board; JAMES H. PORTER, executive vice-president, W. D. ANDERSON, JR., vice-president; A. A. DRAKE, JR., secretary and treasurer; CHARLES C. HERTWIG, assistant secretary and treasurer.

J. A. VAN LAER of the American Enka Corp., accompanied by MRS. VAN LEAR, sailed Oct. 17 on the Holland-America liner "Rotterdam" for a visit to Dutch Enka headquarters.

ROBERT P. DICKS is now vice-president and secretary of Deep River Mfg. Co., Randleman, N. C., succeeding R. P. DEAL as secretary. P. C. STORY succeeded Mr. Deal as manager.

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C. W. ENSIGN, vice-president and general manager of the Ensign Cotton Mills, of Forsyth and Hampton, Ga. is under treatment at Forsyth, Ga., for a broken collar bone and severe lacerations and bruises, as a result of an automobile accident. Mr. Ensign, who has charge of the company's offices in New York City, was home on a business trip and was planning to return to New York this week.

R. W. ARRINGTON, vice-president of the Union Bleachery of Greenville, S. C., delivered the principal address at the monthly meeting of the Greenville Textile Club, held in the auditorium of the Parker High School the evening of Oct. 17.

N. E. DEVEREUX, secretary of the Oneita Knitting Mills, Utica, N. Y., is among a group of prominent business men chosen by the chamber of commerce to outline plans for a reorganization in the municipal form of government in that city.

Julian Armstrong director of organization for proposed Full-Fashioned Hosiery Exchange.

ALBERT G. MASON, who was treasurer of the Whitman Mills, New Bedford, Mass., for 22 years, is now associated with R. H. DOANE, architect and engineer, in Boston.

JOHN HENDRY, until recently associated with the American Woolen Co., at its Fulton, N. Y., mills, will enter upon his new duties Nov. 1 in an executive capacity with the Botany Worsted Mills, Passaic, N. J.

HORACE G. WOODBURY, commencing Nov. 1, will become associated with Wamsutta Mills as executive in charge of New York sales. Since April of this year Mr. Woodbury has been managing the local office of the Industrial Rayon Corp.

ENOCH M. LITTLEJOHN, who has been associated with the Hunter Mfg. & Commission Co., Atlanta, Ga., being in charge of the local office, has resigned his position and has gone to Rome, Ga., where he is now associated with the Rome Mfg. Co.

P. A. FITTS, formerly with Federated Textiles, Inc., is now associated with the Lucille Knitting Co., Inc., Philadelphia, in the Midwest territory.

SCOTT LEWIS, representative in New York for the last several years of Ware Shoals (S. C.) Mfg. Co.'s bleachery, will now represent the Fairforest Finishing Co.

PHILIP F. RIPLEY, of Andover, Mass., for the last four years chief chemist of the American Woolen Co., Lawrence, Mass., has tendered his resignation and will retire from active duty after 25 years service with the American Woolen Co. His successor will be CLAXTON MONRO, who has been head chemist at the Wood Worsted Mill, Lawrence, Mass.

T. W. PRESTWICK has been appointed general manager of the Paton Mfg. Co., Ltd., Sherbrooke (Que.), Can.

HERBERT W. WILKINSON, general manager of the Southbridge (Mass.) Finishing Co., has been elected president of the Southbridge Manufacturers and Merchants Association.

GEORGE WILLARD BRIER, who was superintendent and designer at the Oakland (Me.) Mills of the American Woolen Co., until the mill was discontinued a few months ago, is now designer for the Sawyer Mills of the American Woolen Co., at Dover, N. H.

J. F. FAIRCLOTH has been appointed superintendent of the Rhodes-Whitener Mills, Inc., formerly the Miller Mfg. Co., Taylorsville, N. C.

GEORGE F. HUGHES, for several years superintendent of warping, spooling, dressing, etc., at Lancaster Mills, Clinton, Mass., and recently superintendent of the plant, is now connected with Lonsdale (R. I.) Co., in charge of rayon preparation.

C. L. BAUMGARDNER, superintendent of Majestic Mfg. Co. and Climax Spinning

Co., Belmont, N. C., was elected a director of Belmont Kiwanis Club at the recent annual meeting.

RICHARD H. PINNEY, superintendent of the Phoenix Woolen Co., Stafford, Conn., and JOHN J. QUINN, former boss weaver for the Rhode Island Worsted Co., Stafford Springs, Conn., have been nominated by the Democrats of that town for representatives to the General Assembly.

E. T. SAULNIER, Saco, Me., for the last 18 months general superintendent of the Pepperell Mfg. Co., Biddeford, has been made superintendent of the York Mfg. Co., Saco, controlled by the New England Industries, Inc. He finished with the Pepperell company Oct. 1 and began his new duties Oct. 20.

W. G. REYNOLDS, formerly of Selma, N. C., is now superintendent and JACK GIBSON, of McColl, S. C., has been appointed overseer of carding at the Morgan Mills of Georgia, Millen, Ga.

GEORGE PHILLIPS, finisher at the Waterside Mills, Lowell, Mass., has accepted the position of superintendent of the finishing plant of the Brookside Mills, West Point, Ga., which finishes the products from the company's plant at Knoxville, Tenn.

W. A. SPENCER has been appointed superintendent of the Henrietta Mill, No. 2, at Caroleen, N. C., to succeed C. H. LOCKMAN, who recently resigned.

JULIAN H. MEYERS, formerly superintendent of the dyeing, boarding, finishing and shipping departments of the Paul Knitting Mills, Inc., Pulaski, Va., and more recently connected with the Cavalier Hosiery Mills, Narrows, Va., has assumed his new duties with the Gray Hosiery Mills, Inc., Bristol, Va.

J. A. WIX has tendered his resignation as superintendent of the Aiken Mills, Bath, S. C.

WILLIAM PARKER, superintendent of Mill No. 2 of Bibb Mfg. Co., Macon, Ga., and MRS. PARKER, have returned from a motor trip to Washington and points in the Carolinas and Virginia.

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MARSHALL STONE is now superintendent of the plant of Pacolet Mfg. Co., New Holland, Ga., succeeding G. S. ELLIOTT, who recently resigned.

W. C. WARD, superintendent of the Erwin Cotton Mills, No. 4, West Durham, N. C., has resigned, effective Oct. 1.

HOWARD LARNED, assistant superintendent of the Fabyan Woolen Co., Medway, Mass., has been transferred to duties in the New York office of the company.

GEORGE E. BIDWELL has taken the position as overseer of finishing for the Bedford Johnson Co., Inc., Bedford, Va. Mr. Bidwell comes from Woonsocket, R. I.

J. A. BOYD, graduate of the textile department Clemson College, S. C., in 1926, has been added to the staff of the textile chemistry, rayon and dyeing division of the Clemson textile department as laboratory assistant. He has had several years of practical experience in bleaching and mercerizing.

Fred A. Rakestraw of Hyde, Rakestraw Co., Philadelphia, who was reelected last week, president of the Cotton Yarn Merchants Association.

J. S. BISHOP is now head of the night weaving at Erlanger (N. C.) Cotton Mills.

W. R. ENNIS, JR., head of the spinning department of the Langley (S. C.) Mills, has resigned.

DAVID SNYDER will be employed as head dyer at the plant of S. & S. Dyeing & Finishing Co., Inc., Philadelphia, Pa.

WALTER OLDREAD, overseer of the beaming department of the Thorndike Co., West Warren, Mass., for the last five years, has resigned to accept a similar position with the Otis Co., Ware, Mass.

THOMAS JACKSON, who has been employed at the American Woolen Co.'s Washington Mills, at Lawrence, Mass., for 30 years and for the last ten years superintendent of the finishing department, has resigned and severed his connection with the mill. His successor has not yet been appointed.

THOMAS F. MCDONALD, JR., son of the superintendent of the Gleasondale (Mass.) Woolen Mills, Inc., and his assistant, and ABIGAIL A. CONNOLLY, Marlboro, Mass., were married in the latter city on Sept. 7. They are spending their honeymoon on an automobile trip to Los Angeles, Cal.

GEORGE GLENN has resigned as assistant superintendent of the Swift Spinning Mills, Columbus, Ga., to accept the position of overseer of carding at Pepperell Mills, Lindale, Ga.

WILLIAM KNOWLES, formerly a designer at Whitman Mills, New Bedford, Mass., is now assistant superintendent at plant of Celanese Corp. of America, Amcelle, Md.

STEPHEN R. MOORE, former assistant to SAMUEL HOLT in the weaving and designing department of the New Bedford (Mass.) Textile School, now is with the Steel Heddle Co., Philadelphia.

JAMES O'NEILL, North Brookfield, Mass., has accepted a position as loom fixer with the M. J. Mack Textile Corp., Stafford Springs, Conn.

B. L. COX has resigned as overseer of weaving at the Edna Cotton Mills, Reidsville, N. C., and has accepted a similar position with the Martinsville (Va.) Cotton Mills.

HERBERT WORSMAN, overseer of finishing for Amos Abbott Co., Dexter, Me., has resigned his position with this company.

THOMAS GENDRON has taken the position as overseer of cutting for the Elliott Mfg. Co., Manchester, N. H. Mr. Gendron comes from Clayville, N. Y.

HARRY WOODCOCK, Grand Rapids, Mich., has taken the position as overseer of knitting for the Grover Knitting Co., Montreal P. Q.), Can.

P. J. ARRAN, who has been for some time overseer of finishing at the plant of the La Porte (Ind.) Woolen Mills, has resigned.

JOHN DOBBS, retired overseer of scouring, carding and combing for the Massachusetts Mohair Plush Co., Lowell, Mass., observed his 72nd birthday anniversary on Sept. 15.

JOSEPH P. FARON, Ware, Mass., has taken the position as overseer of carding for the Rock River Woolen Mills, Janesville, Wis.

GEORGE R. KRAUSE, Keene, N. H., has taken the position as overseer of finishing for the Bridgewater (Vt.) Woolen Co.

J. W. ROWELL, overseer of carding at the Saratoga-Victory Mills, Albertville, Ala., is now in charge of the spinning, spooling and warping departments, also.

J. C. REBAL is now overseer of carding and spinning at the Martinsville (Va.) Cotton Mills.

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LESTER RACHARD has accepted a position as overseer of the cloth room of the Martinsville (Va.) Cotton Mills. He was formerly connected with the Edna Mills, of Reidsville, N. C.

A. L. SUTTON, overseer of weaving at the Tupelo (Miss.) Cotton Mills, has resigned.

W. M. LESTER and W. D. LANIER, who have just been elected members of the Georgia legislature from the city of Augusta, have written the Augusta (Ga.) local branch of the United Textile Workers of America, expressing thanks and gratitude for the support the mill workers gave them in their respective races.

E. B. OUTLAW, who has been second hand in spinning at the Chester (S.C.) plant of the Aragon-Baldwin Cotton Mills, Inc., has been promoted to the position of overseer of the same department.

J. C. HOOD, formerly of Atco, Ga., has been appointed overseer of spinning, and JACK GIBSON, formerly of McColl, S. C., has been appointed overseer of carding at plant of Morgan Cotton Mills of Georgia, Millen, Ga.

NEWS about MILLS

Cotton

Margaret Mill, Huntsville, Ala., has started operations on full week's time for most of its operatives, and the mill employs the full pay roll during four days of the week. This mill was idle only a short while during the dull season.

Cherry Cotton Mills, Florence, Ala., have recently equipped their plant with Breton Minerol process system of oiling cotton.

Undine Twine Mills, Inc., and **New York Net & Twine Co.,** Moodus, Conn., have curtailed schedules temporarily due to a serious water shortage. Both companies, however, have closed negotiations for the installation of electric power equipment, and will generate enough power to offset the water shortage.

Muscogee Mfg. Co., Columbus, Ga., has started up 200 looms on wash rag material and is running these looms night and day, four nights and five days a week.

Aldora Mills, Barnesville, Ga., have opened, after being closed for four months. The resumption of operation will give employment to 500 workers. Night work has been eliminated at the mill.

New England Industries, Inc., Boston, Mass., are reported to have placed an order with the Draper Corp., Hopedale, Mass., for 1,200 Northrop patent automatic looms for replacement in the plants of their subsidiaries, the **York Mfg. Co.,** Saco, Me., and the **Androscoggin Mills,** Lewiston, Me.

Firestone Cotton Mills, New Bedford, Mass., tire fabric manufacturing plant, is to reopen Nov. 3 on full-time operations, with day and night shifts. The plant was closed Oct. 3 for an indefinite period, previous to which it had been operating day and night shifts. As announced by George W. Danielson, manager, the new schedule will remain in effect indefinitely.

Flint Mills, Fall River, Mass., directors are considering an offer received for a controlling interest in the capital stock. J. Whitney Bowen, treasurer, would not confirm the report that the offer was $40 a share, nor that it was made by Jerome A. Newman of the Merchants Mfg. Co.

Erwin (N. C.) Cotton Mills Co. plants No. 2 and No. 3 have resumed operations on a four-day weekly schedule. The mills for the past summer have been running on a three-day-a-week schedule.

White Oak Cotton Mills, Revolution Cotton Mills and **Proximity Mfg. Co.,** Greensboro, N. C., began operations on a four-day-a-week basis Oct. 20. The mills have been running but three days a week since June. About 3,400 workers are employed by the three plants.

Raeford, N. C. Warren S. Johnson, receiver, will offer the **Raeford Cotton Mills Co.** for sale on Oct. 23, according to an announcement. The plant has 10,240 spindles.

***Inverness Mills Co.,** Winston-Salem, N. C. At a meeting of the stockholders held Oct. 20, no decision was reached as to the future of the mill property. Operations will continue until all stocks are worked up, which will require three or four weeks. Whether or not to dismantle the plant is still under consideration.

Ninety-Six (S. C.) Cotton Mill, of which J. C. Self is president, is running full-time after having been on a curtailed schedule.

Wool

Waterman Worsted Co., Inc., Putnam, Conn., is reported planning to move to Manchester, N. H., in connection with the reported removal of the **Devonshire Mills,** Goff's Falls, N. H., to the same city. W. H. Duval & Co., Inc., New York, are the reported purchasers of the Devonshire Mills property.

Atlanta (Ga.) Woolen Mills are operating their plant full-time at daylight, 55 hours per week, while several departments are running at night—five nights a week. This mill manufactures cotton and woolen suitings, paddings and bracing cloths, with the padding cloth being made at night.

Perryville Woolen Mills, Inc., Dudley, Mass. The auction sale of this property scheduled for Oct. 18 by the town for unpaid taxes, was adjourned until Oct. 25, at 10 a.m. The mills are operated on a curtailed schedule.

***Clark-Cutler-McDermott Co.,** Franklin, Mass., is running at capacity night and day. The chief product at present is a fabric used for miniature golf greens. A large addition 150x60 ft. is in process of construction.

Pentucket Mills Co., Haverhill, Mass., men's wear worsteds and dress goods, expended $25,000 on alterations in its mill property during the month of September.

Hinsdale (Mass.) Trading Corp., recently organized, has taken over the former local mill of the **Hinsdale Woolen Mills,** lately purchased from Strong, Hewat & Co., North Adams, Mass., and will develop operations for the production of mittens, woolen stockings, and kindred products. Robert H. Ibby, 387 Talbot Ave., Dorchester, Mass., is president of the new company; and John W. Adams, treasurer.

Massachusetts Mohair Plush Co., Lowell, Mass., is giving employment to a working force of close to 400 operatives in different departments, as against a full-time quota of about 500 persons, and expects to hold to the current basis for some time to come.

Rohmer Wool Scouring & Carbonizing Co., Newton, Mass., has placed a contract with Priggen & Co., Boston, for a new warehouse 30x100x25 ft., on which work has been started. The company has also purchased a new scouring machine from the James Hunter Machine Co., North Adams, Mass.

W. E. Tillotson Mfg. Co., Pittsfield, Mass., closed its mills indefinitely on Oct. 18. These mills have recently produced various grades of worsteds. About 300 employees are affected.

E. G. Carlton & Sons, Rochdale, Mass., white flannels, have resumed operations after the annual shutdown of several weeks.

John F. Norman Co., Inc., Linden, N. J., has purchased 50 looms in the plant of Pollock-Huston Co., Inc., Philadelphia, Pa., which concern has discontinued the manufacture of carpets.

Raritan Woolen Mills and the **Somerset Mfg. Co.,** Raritan, N. J., recently merged into the **Raritan Mills,** have filed final notice of dissolution of both companies under New York laws.

Barrymore Seamless Wiltons, Inc., Philadelphia, Pa., a subsidiary of the **Toronto (Ont.) Carpet Mfg. Co.,** will operate the plant at Stamford, Conn., formerly operated by the H. E. Verran Co. The plant was constructed six years ago at a cost of $1,000,000 and has 250,000 sq.ft. of manufacturing space. F. B. Hayes is president of Barrymore Seamless Wiltons, Inc.

***Brunswick Worsted Mills,** Pawtucket, R. I., have appointed Leckie & Haskell, New York City, as selling agents. This agency is a partnership comprised of George A. Leckie, who is resigning his position as sales manager of Henry T. Mali Co., and Henry Haskell of the Brunswick Worsted Mills.

Renfrew (Ont., Can.) Woolen Mills, which have been closed for four years, will soon reopen, giving employment to about 85 employees. J. J. Southern, formerly manager of Dominion Woolens & Worsteds, Ltd., of Peterboro, Ont., has been appointed manager.

Dupont Textiles, Ltd., Toronto (Ont.) Can., Christie & Dupont Sts., have surrendered their charter to the Ontario government in order that a readjustment may be made in the ownership of the company which has been purchased by J. H. Douglas.

*Indicates previous mention of project.

***Harris & Co., Ltd.**, Rockwood (Ont.) Can., plant, which has been closed for about five years, has been acquired by a group of Brantford and Hespeler business men. Prominently associated with the venture are James H. Coleman and Charles G. Garner, well known in the textile industry in Brantford, and Alfred C. Roos, and several others who with him were for many years in the employ of the Forbes cloth mill at Hespeler. The plant in Rockwood has 24 looms, spinning, carding, dyeing and other equipment.

Knit

Holly-Maid Knit, Ltd., Los Angeles, Calif., recently organized with a capital of $25,000, to operate a local knitting mill, will be represented by Anderson & Anderson, Black Bldg., Los Angeles, attorneys. The incorporators are B. A. and Forest A. Willis, Beverly Hills, Calif.; and Charles J. Parker, Pasadena, Calif.

Rollins Hosiery Mills, Des Moines, Iowa, have increased the working force at their local mill by about 25 operatives and will advance production at once correspondingly.

Merrimack Hosiery Co., Lowell, Mass., has been granted a charter of incorporation by Secretary of State Frederick W. Cook, capital stock 500 shares, no par value. The incorporators are Lillian and William J. Dearns and Russell C. Dawe, all of Lowell.

Ballston (N. Y.) Knitting Co. is now operating its yarn departments on overtime schedules with additional workers.

Montgomery Textile Co., Fort Plain, N. Y., glove silk underwear cloth, is increasing operations by taking on many additional workers.

A. H. Rogers Silk Co., Gloversville, N. Y., rayon underwear, has been enlarging its force because of increased demand.

Federal Knitting Mills Co., Cleveland, Ohio, is running at close to normal production on knitted suits and kindred knitwear, and expects to hold to the present basis for some weeks to come.

Columbiaknit, Inc., Portland, Ore., of which A. L. Friedenthal is manager, reports the plant is working three shifts, from 7 a.m. to 6 a.m., manufacturing three piece costumes, knit dresses and swimming suits, with volume of business approximately 20% ahead of last year. The swimming suits are being manufactured for a foreign market.

Peters Hosiery Mill, New Cumberland, Pa., has resumed production on close to normal schedule after a curtailment of several weeks.

Davenport Hosiery Mills, Chattanooga, Tenn., which a few months ago discontinued the manufacture of circular-knit hosiery, are at present manufacturing only women's full-fashioned hosiery. The plant is operating day and night, as it has for the last 11 years, according to R. B. Davenport, Jr., vice-president.

*Indicates previous mention of project.

Bryan Hosiery Mills, Inc., and **Champion Knitting Mills**, Chattanooga, Tenn., and the **Debonair Hosiery Mills,** Cleveland, Tenn., are operating at capacity on day and night schedules, and the entire production is sold up to Jan. 1.

Pikeville (Tenn.) Hosiery Mills, manufacturers of children's and misses' 300 needle hosiery, have resumed a full-time operating schedule, according to G. G. Giles, manager of operations, who also stated that the company is planning installation at an early date of finishing machinery.

Silk

Holland Mfg. Co., Willimantic, Conn., has inaugurated a five-day-a-week schedule of 45 hours instead of 35 hours as adopted a number of months back.

Champlain Silk Mills, Whitehall, N. Y., will resume operations on a large scale immediately, employing about 1,200 persons. The mills have been running on a part-time basis for several months. Opening of the mills on a full time basis will result in a weekly payroll of about $30,000.

Stehlisilks Corp. has resumed operations at its High Point, N. C., plant on a full-time basis after running part time for several months.

Pinehurst Silk Mills, Hemp, N. C., which were recently reorganized and which have resumed operations on full-time after being shut down, may be enlarged, according to an announcement.

Emaus (Pa.) Throwing Mills, Inc., chartered under state laws with a capital of $10,000, will take over and succeed to the company of same name with local mill on North St. The incorporators of the new company are Robert S. and H. Walter Stonemack. The first noted has been elected treasurer.

***Associated Textiles of Canada, Ltd.**, Louiseville (Que.) Can., have started production with 150 looms at their recently completed mill.

Rayon

Industrial Rayon Corp., Cleveland, Ohio, has awarded general contract to George A. Rutherford, Cleveland, for a one-story machine-room addition, 120x 124 ft., on Walford St., reported to cost over $65,000, with equipment. Christian, Schwarzenberg & Gaede, Union Bldg., Cleveland, are architects.

Du Pont Rayon Co., Ampthill, Richmond, Va., is maintaining production on a slightly curtailed basis at its local mill, and will continue with an average of close to normal working quota for an indefinite period.

Finishing

Hamilton Print Works, Inc., Hoboken, N. J., recently chartered with a capital of $25,000, to operate a local print and dye works, will be represented by Pierson, Schroeder & Brand, 84 Washington St., Hoboken, attorneys. The incorporators include E. Riordan and Charles L. VonDreele, both of Hoboken.

Radiance Piece Dye Works, Inc., Prospect Park, N. J., have asked bids for a new one-story dye house on East 25th St., Paterson, N. J., 50x200 ft., brick and concrete construction, to cost about $35,000, with equipment. Elliott R. Coe, 136 Washington St., Paterson, is architect.

S. & S. Dyeing & Finishing Co., Inc., Philadelphia, Pa., has been established at 2022-24 E. Westmoreland St. Thomas F. Woods is president and J. O. V. Stetten secretary and treasurer.

***Sayles Finishing Plants, Inc.,** Phillipsdale, R. I., are progressing rapidly with the work on the engraving shop addition. The Central Engineering & Construction Co., general contractors, announced the award of structural steel to the Providence (R. I.) Steel & Iron Co.

Ray-Ser Dyeing Co., Chattanooga, Tenn., is installing new twisting machinery for the production of ply rayon yarns and combination yarns of rayon, silk, cotton, acetate and worsted. Floor space at the plant has been doubled and more winders will soon be added.

Universal Silk Dyers, Ltd., Lindsay (Ont.), Can., have been organized with a capital stock of $350,000. The building, which contains 20,000 sq.ft. of space, has been completely altered and dyeing and finishing equipment installed for the handling of piece goods made of fine silk, rayon and fibers. The head office is at 884-88 Dufferin St., Toronto, and the company will be under joint management with the **Dickenson Dye Works, Ltd.**, Toronto. Ellsworth Flavelle is president, Dr. F. Zeidler, F.C.I.C., vice-president and general manager.

Miscellaneous

Southern Textile Co., of which E. B. Elliott is president, has plans for the erection of a plant for spinning ramie at Miami, Fla., the plant to have a weekly production of ten tons. At the outset, the ramie will be imported from China.

Park Mills, Inc., Hyde Park, Mass., garnett waste, have been formed with a capital of 300 shares of stock, no par value, to take over and operate company of same name with local mill. John Beaumont, heretofore proprietor, will be president of the new company. Clara E. Beaumont has been elected treasurer.

J. E. Barbour-Allentown Co., Paterson, N. J., is moving its flax department to Ludlow, Mass., and will combine with the same department of Ludlow Mfg. Associates, which acquired the Paterson concern some time ago. From 60 to 70 employees in Paterson are affected by the change. The Paterson department has been producing shoe thread.

Raleigh (N. C.) Bedding Co. has been organized to operate a local mattress and bedding plant. F. B. Reynolds, 1230 Mordecai Drive, Raleigh, heads the company.

Morice Twine Mills Corp., Roanoke, Va., has sold all machinery equipment to C. L. Upchurch & Sons, Athens, Ga.

Questions and Answers

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. We do not undertake, however, routine analysis of yarn or fabric, or investigation involving unusual expense.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith.

Letters expressing opinions or voicing criticism are cordially invited. These will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Throwing Tussah Silk

Technical Editor:

Will you please advise me how to treat tussah silk to make a two-end thread of eight turns? I am running some at present and am having difficulty in getting the yarn to run off spools. It will run beautifully for a while; then the filaments split and become crossed, and the end breaks. I shall appreciate your opinion as to the cause of this defect. (7339)

Assuming that the tussah used is the type reeled in a modern filature, the following methods are recommended. Open the skeins, hang them on poles, and spray them with from 10 to 12% of neats-foot or olive oil. Use an oil low in acidity (under 5%), so as to avoid an unpleasant odor. In spraying the oil, the best results are obtained by using an air atomizer. A compounded oil consisting of 50% mineral and 50% neats-foot or olive oil has less odor, and gives good results without causing any dyeing trouble.

Steam the skeins with dry steam from 2 to 10 min., depending on the hardness of the reel markings or gums. Keep the time down to the minimum, so as to prevent opening the thread more than is necessary. A pressure over 40 lb. is generally required to get a dry steam. Wet steam mats the skeins and increases the winding trouble. Be sure that you oil the skeins before steaming.

In winding, use a quick traverse having about eight to ten winds around the bobbin with a 3- to 3¼-in. throw. The barrel of the bobbin should not be less than 2 in. in diameter, and the head should not be over 2½ in. A 4-in. barrel bobbin with a 4½-in. head would give an even better result. The object of the quick traverse is to save waste in finding an end, and to prevent an open thread being wound under or crossed by a close wind and split. The object of the large barrel bobbin is to lay the thread loosely on the barrel, prevent splitting the thread, and improve the unwinding.

Double the thread on the 5B's and put in all of the twist if you have enough machines. Use a bar traveler at a speed that gives the best results. Possibly 3,500 to 4,000 r.p.m. will run the best. If you have 5B's with single and double feed rollers, use the single rollers and keep them highly polished, so as to prevent roller laps. If you do not get the correct twist called for — eight turns — when using the change gears, make up a combination that gives the required turns. If you are short on 5B's, put in three turns on 5B's and add the rest on a second-time spinner. Put large-holed porcelain guides on drop fallers to prevent catching of the defects and breaking down of the thread. If you do not have any 5B's, and use the single process, keep your spinner speed under 5 r.p.m. and use an extra large eye on the flyers. The second-time spinner bobbin should not have a throw of over 3 in. On doubling, use the slower speed, so as to avoid overtight bobbins and split ends; also use a quick traverse.

◆

Bleaching Gauze

Technical Editor:

Will you kindly give me some information on bleaching gauze bandages (sterilized aseptic)? The weight of the cloth is 23 yards to the pound. I also should like to know how to bleach raw, waste cotton. (7348)

Work of such an open construction as this sample will require a great amount of care in handling. We doubt if it would stand up under the regular bleach-house treatment. We believe that vats or equipment of the type of the Bennett kier will be satisfactory, as the chemicking, washing, and souring could be carried out without running the goods through log washers. Since the material is to be used for bandages, it is quite necessary that it be absorbent. This requires that the goods be thoroughly kier boiled. Followinig this treatment by chemicking and souring will leave the goods aseptic, and we believe that no special treatment will be required if care be taken in handling.

Raw cotton will require caustic boiling, chemicking, and souring. The work should be done in a vat equipped with a pump and spray for circulating the liquor. The strength of the various liquors based on weight of dry goods might be as follows: for boiling, 2% of caustic, 1% of silicate, and 1% of sulfonated oil or kier assistant; for chemicking, about 1½° or 2° Tw. sodium hypochlorite; and for souring, about ½° Tw. of acid—one part hydrochloric and two parts sulfuric. These quantities will serve as a starting point, to be changed one way or another after observing the results.

◆

Finishing Alpaca

Technical Editor:

Enclosed you will find a sample of alpaca. We want to finish this type of fabric both in plain and chinchilla finish. It is for dyeing. Will you kindly outline the process for each finish and list the machinery needed? (7345)

To secure a plain finish on this type of fabric, the goods should be scoured in the open width, either in an open kettle or in a continuous crabbing machine equipped with the necessary number of brushes attached to the bowls to keep the fibers straight. The first bowl is made up with the scour liquor, and the others with the wash-off bath. This treatment may be repeated if the fabric requires it. The

scouring may be done in the regular open flat-work kettle by sewing the goods in endless form, soaping for a given period (making certain that the goods are scouring well), and rinsing in the usual manner.

With the scouring accomplished, dyeing is best done in an open kettle, since this avoids all the troubles of wrinkled goods and disturbed face fibers. After dyeing, the fabric is extracted and dried, using the vacuum system with tiger attachment in front of the dryers. This will comb out the face of the goods and dry the fibers in whatever position is desired. Care must be taken to prevent the face coming in contact with any object that would be likely to mark or mar the work of the tiger in straightening out the face.

When drying is completed, the goods should be well tigered in the dry state, previous to shearing. This process will require the use of the raising brush for the first two runs. Keep the raising brush off during the last finishing runs. Next the goods may be tentered to the desired width with the application of a little steam, running the goods face up on the tenter, and rolling up while in the process of tentering.

In the examination of these fabrics, it is advantageous to roll them from one roll to the other, without allowing them to be folded or left to be crushed by other pieces. Folding has a tendency to mark and causes wrinkles. The finished fabric is shipped on frames made especially for this type of goods.

It is our opinion that this type of yarn, as well as the construction of the fabric, would not make a chinchilla of satisfactory standard, although some chinchilla effect might be attained by the use of the chinchilla machine.

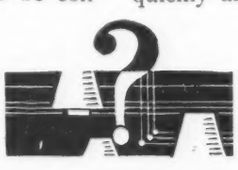
◆

Scouring Wool

Technical Editor:

In the course of our work, we handle an extensive custom business, which consists of the scouring and carding of grease wool into batting for comforts. We are having trouble in getting the wool free from the grease and odor. We use a good grade of soap chips, and have tried soda ash and lye with the soap, but do not seem to be entirely successful. If you have any suggestions that would be of assistance, we should be glad to hear from you. (7334)

The information given in the inquiry is insufficient to allow a definite statement of the cause of the trouble, and we shall have to mention several things which might cause odor. The first possibility is the water, and this may be eliminated if similar trouble has not been experienced before. A changeable water supply, such as is afforded by a river or stream into which mills are dumping industrial waste, may be quite all right for one period and be a source of great trouble at some other time. If the water for any reason becomes acid, it inevitably will cause trouble in scouring. If the water supply is not likely to change, as for instance, water coming from an artesian well or a pond which is not liable to be contaminated by industrial waste, and if no trouble has been experienced previously, the water as a source of trouble may be eliminated. If there has been previous trouble, the water should be examined for the presence of free carbon dioxide,



THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

and temporary or permanent hardness. Any of these conditions will precipitate soap from solution and cause odor in scoured wool.

Assuming that the water is suitable for scouring purposes, the proper combination of soap and soda ash in solution at the proper temperature should produce acceptable results. The usual cause for trouble is that a machine is overcrowded; that is, the scourer tries to get too much out of the machine, and consequently does a poor job of scouring.

A three-bowl machine will not do as good work as a four-bowl machine; but it is possible to get fairly satisfactory work from the small machine, provided it is not operated at too high a rate. The concentration of soda ash and soap varies for different wools. Briefly, the first bowl should contain warm water and soda ash, and the temperature should not exceed 125° F., and preferably should be lower. The second bowl should contain soda ash and soap; the third bowl, soap alone; and the fourth bowl, a cold, running rinse. Red-oil or olive-oil soap is usually selected for this type of work.

Ordinary soda is satisfactory for scouring purposes. You should not use lye as a scouring agent. If extra fine work is required, a mono-hydrate of soda should be used. This costs very little more than soda ash.

◆

Duplexing Cotton and Felt

Technical Editor:

We desire to find a paste or cement that will cement wool felt and cotton together quickly and permanently. The method we now use is to place sheets of rubber tissue between the cotton and wool felt and press with a hot iron. The process is both expensive and slow. We have found a fairly satisfactory cement that will hold cotton to cotton or wool to wool, but not wool to cotton. Enclosed are samples for experiment. We desire the napped side of the cotton to be out and the smooth side next to the felt. (7326)

Several methods are employed to cement wool felt and cotton together quickly and permanently. Various glues, gums, and similar materials work satisfactorily, so far as cheapness and quickness are concerned. However, to secure a permanent bond, the usual procedures probably would not be feasible. It is our belief that the best way to fasten these two pieces of cloth together quickly and permanently is to send the piece of cotton napped goods to a rubber-coating concern and have a calender coat of a cold-curing rubber applied to the unnapped side of the cotton. A spreader coat of rubber could be applied to the felt and the two fabrics joined on a hot calender

roller. This would give a permanent bond and enable you to have a large daily yardage stuck together in this manner. We believe it would be less expensive than taking cheap rubber tissue and joining the fabrics together in the manner which you are now following.

The spreader coat of rubber on the felt would penetrate the fibers sufficiently to establish a bond, and at the same time the spreader-coat method of applying this rubber would not cause the felt to bow, as would be the case if the felt ran through a calender and received a calender coat of rubber.

It is possible that the use of a rubber cement would prove to be the solution of your problem.

◆

Silk Filaments Bunch Up at Cleaners

Technical Editor:

We are forwarding, under separate cover, some spools of pure-dyed silk in two colors; viz., nude and gunmetal. On the gunmetal lot we are encountering considerable trouble on our winding operation, mainly in coning or back-winding the silk from the winders' spools, due to the filaments bunching up under the cleaner-knives and breaking. We have tried several openings in the blades with the same result, and have concluded that the trouble does not occur on our machines due to cutting. We therefore lay the trouble to either defective dyeing or throwing on this particular lot. One outside opinion is advanced that the throwster is not giving us a strictly emulsified solution, thereby causing the fat particles to adhere to the filaments. We also believe that there might have been an excessive boil-off, which of course would cause split ends.

We are sending, together with the spools, a skein of thrown silk from our raw lot 87, which was used for the dye lot. Inasmuch as several dye lots have come through from this lot without encountering the above trouble, we are inclined to attribute it to other than the throwster's fault. The nude lot is from another raw lot entirely (lot 755, raw skein enclosed), which seems to be O.K. If you will compare the threads on the seriplane, you will note the excessive amount of filament (or foreign?) particles on the gunmetal.

(7328)

An inspection of the sample shows the following: The skein of thrown silk, lot 87, has a number of cocoon-filament loops. One skein is not sufficient to estimate whether the lot is low in minor cleanness defects and neatness. The other skein of thrown silk, lot 755, has a smaller number of cocoon-filament loops than lot 87. Compare the number of loops in the minor cleanness defects and also the neatness test on both raw-silk tests. The throwing is good on both; no foreign substance or sludge is found.

The thread on spools of nude-dyed silk is slightly fuzzy, but is a cleaner thread than the gunmetal. The spools of gunmetal-dyed silk show considerable fuzziness. The strength, however, is good and no weakening effect by the dyer is indicated.

The waste collected at the cleaners show knots and balls of silk lint. An analysis of these conditions indicates that the primary cause of the back-winding trouble is due to the cocoon-filament loops in the raw silk. The action of the water, or that of hydraulics, in boiling-off or dyeing tends to split the cocoon filament loops into fibrilae, which are as fine as spider webs and quite weak. These fibrilae break and cause a fuzzy condition. In cone winding they brush up at the cleaner as silk lint, collect as a ball, fill up the opening, and break down the thread. A remedy is found in running the thread, as it winds off the skein, through two pieces of mohair plush and brushing the top and bottom of the thread free from lint.

◆

Shaded Condition in Grenadine Full-Fashioned Hosiery

Technical Editor:

We are enclosing several four-thread, grenadine-twisted, full-fashioned stockings. These stockings were degummed and then dyed in another dyeing machine after being put in bags. You will notice that they are shaded and that each stocking is of a little different color, although they were dyed at the same time. When this customer's goods are dyed along with other goods, this shadiness appears only on the aforesaid goods. Our belief is that it must be either due to improper boil-off, in which olive-oil soap is used, or in the manufacture of the hosiery itself. (7347)

We believe there is some mix-up or misunderstanding concerning this inquiry. The samples clearly show that the goods have been stripped and redyed. This is indicated by the faded, hungy appearance of the colored picot thread, and by the impression of the foot transfer which has been left on every stocking. This indicates that transferred goods were split in the pairs, the goods having been transferred were stripped for the purpose of removing the transfer, and probably the other stocking associated with each pair which was without transfer was used in its original color. It is possible that wrong samples have been submitted with the inquiry; and since it is natural to expect some shading in redyeing stripped work, we do not feel that further comment is in order.

◆

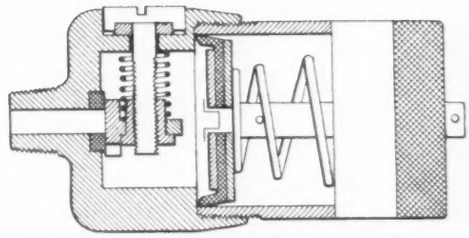
Brown Stains on Knit Goods

Technical Editor:

We are enclosing herewith a piece of cream-tinted cotton and also two samples with brown stains. The cream sample is our correct shade. The stains are showing up on garments which have been manufactured about two months; some start at the bottom of the garment, some at the top working towards the center, and others start in the center of the garment. (7346)

Not knowing your method of bleaching or boiling off previous to dyeing, we are only able to hazard an opinion regarding the causes of the brown stain which appears on your cream-tinted fabric. A brown color of this nature usually indicates that the goods have been bleached with permanganate, and due to insufficient souring, the permanganate has not been completely neutralized or removed. Frequently a brown color will appear on the cloth — sometimes immediately, at other times more slowly. Then again, if a bluing has been used on the bleached cotton, air conditions will sometimes change this bluing to a slight brownish tint. Also, cloth stored where the ends of the material are exposed to the light will air stain in a manner similar to your sample. These three causes are the most frequent; and we suggest that you check for one or more of them.

New Machinery & Processes



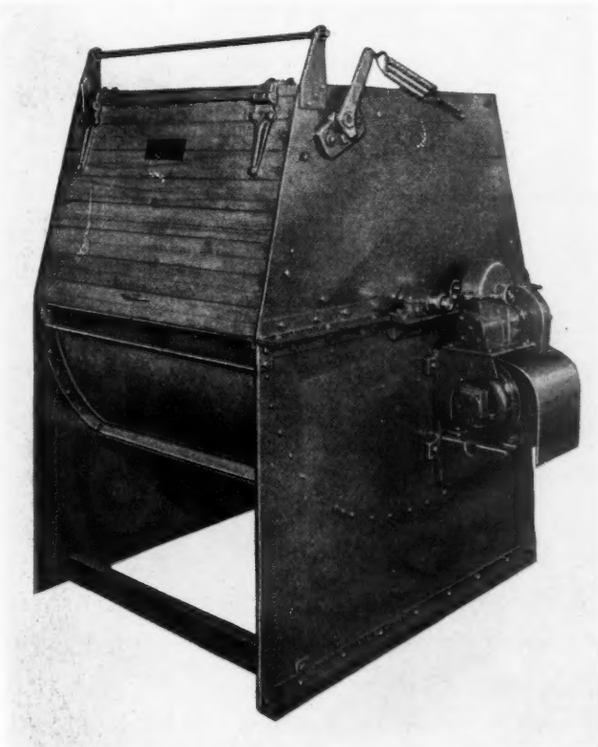
Lubricator designed to furnish regulated quantity of lubricant to bearing

Sample-Lot Skein Dyeing Machine

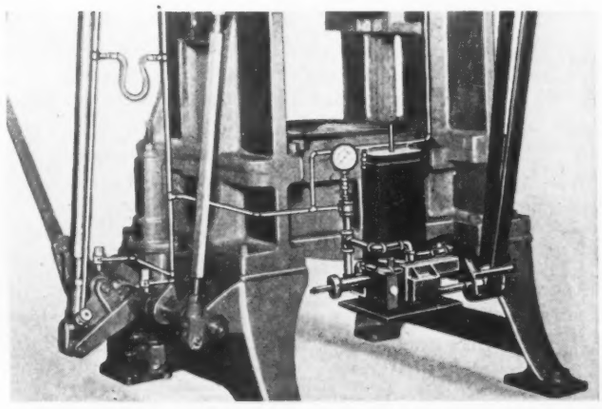
SAMPLE lots of skein yarn may be dyed by plant methods with a two-stick machine placed on the market recently by H. W. Butterworth & Sons Co., Philadelphia. This sample machine is suitable for dyeing rayon, silk, cotton, and wool, and is designed to duplicate the work of larger-production equipment. It operates on the well-known rotary principle, while the reel incorporates provision for adjustment to skeins of varying lengths. The standard tub is of semi-self-supporting, Monel-metal construction. If desired, however, it may be made of wood with a suitable lining. The drive is single-speed, silent-chain and worm-gear reduction, totally enclosed. A constant-speed motor may be used for single-speed operation, or a multi-speed motor when varying speeds are required. The machine is also available in the hoist type.

Lubricator and Compressor

TWO new developments in industrial lubrication, the Borne Universal Lubricator and the Borne Universal Compressor, have been announced recently by Borne Scrymser Co., 17 Battery Place, New York.



Two-stick dyeing machine for processing sample lots of skein yarn



Central lubrication system with lubricators connected to compressor

The lubricator is designed to furnish a regulated quantity of lubricant to the bearing. It may be installed separately at each bearing or used in connection with the compressor on machinery having numerous bearings to be lubricated from a central system. The compressor, which is intended for use on machinery with several bearings, delivers to each lubricator an even supply of clean lubricant under the required pressure.

Use of the Universal Lubricator is said to give a constant, regulated supply of fresh lubricant to the bearings at all times during operation of the machine, thus building up a constant film of oil or grease between the wearing surfaces, and thereby reducing maintenance costs. At the same time, there results an economy in the use of lubricant, since the device eliminates the human element, delivering a weighed quantity of oil or grease by means of a control arrangement. Other advantages claimed for the lubricator include increased safety factor, decreased fire hazard, and lowered starting-load factor.

An important feature of the lubricator is a graduated adjusting screw for increasing or decreasing the area of orifice to permit the proper amount of lubricant under pressure to be delivered to the bearings. After turning the adjusting screw in a clockwise direction until the proper feed of lubricant is attained, the indication on the screw is noted and the other lubricators are set to the same point. This insures the proper openings on all the lubricators for the particular viscosity of oil or consistency of grease being used. A full revolution of the screw will give a complete, "full-open" or "full-closed" position on the orifice slide. Due to the particular design of the piston spring, an equal pressure is exerted on the lubricant with the piston at any point. The lubricators are made in the following capacities: 1 oz., 2 oz., 3 oz., 8 oz.; and are designed to hold full capacity of lubricant as stamped on the cup, so that consumption can be more accurately gaged.

The Universal compressor functions with oils of any

viscosity or greases of most any consistency. It is designed for operation by hand, by power through pulleys and belt from any convenient point off the machine, or by direct connection to an electric motor. When piped up to a machine in connection with Universal lubricators installed at each bearing point, the compressor will deliver to the lubricators an even supply of clean lubricant under the required pressure in much less time than it takes to fill a hand grease cup. This eliminates the hazards connected with hand lubrication, and obviates the necessity of shutting down of the machine. It also provides a means of supplying lubricant to remote and inaccessible bearings and moving parts, such as eccentrics, cross heads, etc.

Some of the features found on the Universal compressor are a reservoir, provided with an indicating rod which shows the quantity of lubricant present; an adjustable spring and ball check valve at the entrance to the main line leading from a booster, which prevents return of lubricant into the booster pump and keeps the lines full at all times; a hydraulic gage attached to the main line at the compressor to indicate the amount of pressure required to fill up pipe lines and lubricators installed at the various bearing points on the machine and also to detect any trouble in the system; bleed valves, one leading into the booster, the other into main feed line to expel any air which might pocket itself in the grease; and a replaceable booster sleeve which can be readily removed in case of excessive wear.

Shipping Containers in Brilliant Colors

MYRACOL, a colored liner which makes practically a display box out of every corrugated container passing out of the shipping rooms of users, has been placed on the market recently by Container Corporation of America, 111 West Washington St., Chicago. The new colored liners are produced in a large range of colors. Since the name of the product and the manufacturer can be worked out in a manner to harmonize with the predominating color of the box, striking results can be obtained.

It is believed that because of this great attention-getting value, boxes in color will identify the goods of a manufacturer and create interest and comment favorable to him and his product. In addition, boxes in color can be used to advantage in window displays, where their advertising value is comparable with bill boards and car cards at a much lower cost. They also attract attention on trucks, sidewalks, and shipping platforms. On the shelves of a warehouse, jobber, or retailer the many different colors of the packages will be a help in the quick identification of the goods of various manufacturers, saving valuable time.

Sizing Compounds

TWO new sizing compounds, Raygomm Crepe and Raygomm NCA, have been announced recently by Stein, Hall & Co., Inc., 288 Madison Ave., New York. The first product was developed to eliminate harshness and excessive stiffness in sizing warps for rayon crepes and other weaves where soft finish is required. Shiners, raindrops, and other defects due to sizing are said to be eliminated by the use of this product. Addition of a softener is not required, since Raygomm Crepe has been developed to insure smooth, pliable warps, free from harshness, but properly sized for efficient weaving. This product is easily washed out in plain warm water.

Raygomm NCA has been brought out to supply the demand for a dry-form size for cellulose-acetate yarns. When this product is employed, no addition of wetting-out agents or other chemical is necessary. Advantages claimed for this material are that it forms an efficient protective coating, holding the filaments together, increasing tensile strength without sacrificing flexibility or smoothness, and in no way altering the special qualities to this yarn. Both types of Raygomm are supplied in dry concentrated form, and will keep almost indefinitely if stored in a cool, dry place.

Cooling Enclosed Motors

IT has been announced recently that Reliance Electric & Engineering Co., 1088 Ivanhoe Rd., Cleveland, Ohio, has brought out a line of fully-enclosed, fan-cooled induction motors in sizes of 20 hp., 1,200 r.p.m. and above, in which the Mossay principle of cooling is used. This method of cooling is employed for the larger sizes because the design of the smaller motors does not provide sufficient cooling area. The extra cooling area is obtained by use of U-shaped tubes extending over the outside of the stator. The legs of these tubes are welded to the inside headers, forming dust-tight joints.

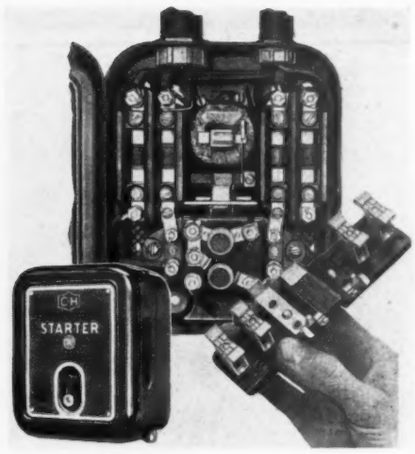
A single internal fan on the rotor circulates the confined warm air through the tubes, over which are blown blasts of cool outside air from one end of the motor to the other. The stator winding and rotor are tightly enclosed, compelling the cool air to follow along outside of the tubes. The fits for all enclosing parts are machined surfaces. All seals are stationary. In dismantling, the only extra parts to remove in addition to those of the standard open motor are the external fan guard and fan.

Drain Valve

RECENTLY there has been introduced to the textile industry by the Ohio Injector Co., Wadsworth, Ohio, a drain valve designed for use with pressures up to 300 lb. per sq.in. This valve was developed originally for use on locomotive water-column and gage glasses, but more recently has been applied to power-plant and other industrial applications. The valve is substantially built

Mossay principle of cooling for fully enclosed induction motors

Drain valve for high-pressure work



Automatic starter with contact board removed to show coin-silver contacts

and is designed with a liberal factor of safety. Body and bonnet are of special valve bronze of high tensile strength. The stem is of manganese bronze. A removable seat ring and disk are of high-nickel bronze, which was developed particularly to meet conditions found in this class of service. The alloy is said to withstand the erosive action of grit or abrasive which may be carried by the steam or fluid passing through the valve, to retain its physical properties under the high temperatures encountered in 300-lb. steam service, and also to be highly resistant to the chemical action of acid or other chemicals found in manufacturing processes or in treated water. The special form of seating surfaces used on the disk and seat ring was adopted as the result of a long series of tests where the water conditions were particularly bad and excessive amounts of scale were deposited. The valves are made in $\frac{3}{8}$- and $\frac{3}{4}$-in. sizes and have the word "Drain" cast on the bodies to designate that they are to be used for this particular service only.

Automatic Starters with Magnetic Contactor

CUTLER-HAMMER, INC., 207 Twelfth St., Milwaukee, Wis., announces that it has redesigned its entire line of Type AAA automatic starters for small a.-c. motors, to incorporate a newly developed Twin-Break magnetic contactor. In this new contactor the contacts are of heavy coin-silver which is said to retain its current-carrying capacity even if oxidized and to make a good contact with little temperature rise. The Twin-Break principle, it is further stated, reduces the arc voltage by half, while Thermoplax arc pockets, by reducing the air content around the contacts, prevent the formation of a destructive arc. These arc pockets also act as a shield, so that wires which are run along the side of the contactor cannot interfere with its operation.

A magnetic latch has been added to prevent accidental closure of the contacts if the starter is accidentally bumped or tilted; and new hinge structure facilitates removing and replacing the contact board and insures correct replacing of the board before the starter can operate. The new contactors are made in three- and four-pole types. The maximum rating for two- or three phase types are: 3 hp., 110 volts; 5 hp. 220 volts; and $7\frac{1}{2}$ hp., 440 or 550 volts.

New Dyestuffs

New products introduced recently by Newport Chemical Works, Inc., Passaic, N. J., are Newport Anthraquinone Blues 2G, WG, and WB, and Newport Light Fast Blue 8GL. The Anthraquinone Chrome Blues are particularly adapted for dyeing worsted serges, suitings, and dress goods, making possible the production of a range of popular deep navy shades. They are level dyeing colors and are said to possess excellent fastness to light and good general fastness in other important respects. The brightest shades are obtained when the dyeings are made over a chrome mordant. These colors may also be dyed by the chromate or afterchrome processes, the resultant shades being somewhat duller. A slight afterchroming of the bottom-chrome shades is sometimes resorted to, since this tends to improve the general fastness without making the shades much duller.

•

Newport Light Fast Blue 8GL is a direct color which possesses very good fastness to light and sufficiently good general fastness for most requirements. It is easily soluble, level dyeing, penetrates well, and may be dyed in all closed-type machines, as well as in the pad or jig. It discharges white. On union materials of cotton and silk, or cotton and wool, the animal fibers are dyed very much weaker; if speck dyed they are practically unstained.

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Three new dyestuffs recently announced by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., are Sulfogene Carbon 4G Grains, Pontamine Diazo Blue NA, and Leucosol Brown 3R Double Paste. Sulfogene Carbon 4G Grains is a sulfur dyestuff which produces greenish shades of black which are extremely fast. This product is said to be very soluble and non-dusting. It disperses readily and wets out easily in water, so that the difficulty encountered from floating on the surface is entirely eliminated. Because of its physical form, Sulfogene Carbon 4G Grains is more stable than the powder brands, storage without deterioration being possible for longer periods than with the regular forms of sulfur black. It is stated that by the special selection of intermediates and careful chemical control, the copper content has been so carefully controlled that this dyestuff is suitable for application on all types of cotton materials that are to be rubberized.

•

Pontamine Diazo Blue NA is a direct-dyeing color which, when diazotized and developed with beta naphthol, yields reddish shades of blue. It is said to be particularly suitable for the production of navies and, in combination, for a wide range of dark blues and violets. Also it is adaptable for use on cotton, as raw-stock yarn, or in the piece; and it is stated to be extremely valuable for application on pure-silk materials. The company states that it is suitable for use in all types of machines and is of particular interest for jig dyeing and padding.

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Leucosol Brown 3R Double Paste is a vat color of the anthraquinone series prepared especially for printing. It is stated that it possesses the characteristics of the Leucosol group of colors and is exceedingly fast to all destructive agents with which the color is likely to come in contact, either during the printing or finishing processes or later during the life of the fabric. This color, it is said, is extremely fast to light, washing, soda ash, and chlorine.

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Two new dyestuffs of the Indigosol series, Indigosol Scarlet IB, and Indigosol Brown IRRD, have been placed on the market recently by Carbic Color & Chemical Co., Inc., 451 Washington St., New York. These products, which are manufactured by Durand & Huguenin S.A., produce dyeings of excellent fastness on wool, and are therefore of great interest for fast wool dyeing. They are dyed from a slightly acid bath, then developed in a fresh bath, with bichrome and sulfuric acid. The dyeings obtained with Indigosol Scarlet IB and Indigosol Brown IRRD are said to be of excellent fastness to light, washing, and milling; and the dyestuffs are suitable for fast wool dyeing of all kinds.

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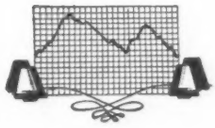
Representatives in All the Principal Countries of the World

TEXTILE WORLD ANALYST



Bottom of General Recession Not Far Away

Textile Industries Should Be Among First to Pick Up, Says Dr. Haney

Summary: **The current business recession appears to be near ebb. A new low level was reached in September, but the decline has become much less rapid. A period of depression and gradual stabilization lies ahead, which is likely to last at least until spring. While there is no positive basis for forecasting a general upturn in the spring, it seems that the necessary readjustments will be well along by that time, and business in general may begin to improve. Owing to their well liquidated condition, the textile industries are likely to be among the first to pick up.**

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The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE month of September showed a new level of general industrial activity. Various measurements of the average activity in important industries now place it more than 20% below normal. It is noteworthy that the optimists have quit announcing the date of business recovery. October will possibly show an even lower level of industrial activity, allowance being made for the fact that the seasonal peak often occurs in that month. It is almost certain to show a level practically as low as that of September.

The situation is strikingly illustrated by the action of the stock market. The prices of stocks collapsed in September and have fallen to new levels for the current recession, wiping out all gains in the averages made since 1927. The current hesitancy and lack of demand in the stock market, illustrates the absence of any certainty as to when business recovery will occur.

General Recession Nears Bottom

Obviously, however, each month is bringing us nearer to the ultimate beginning of business expansion. Obviously, too, each reduction in industrial activity tends to restore the balance between supply and demand, and each decline in commodity prices facilitates the process of bringing buyer and seller together. The only sound way to have regarded the business situation throughout recent months has been to look at it as one requiring the correction of serious maladjustments and the liquidation of accumulated stocks of commodities and over-extended bank credit. Such corrections require time. Usually major business recessions run from one to one and one-half years, and occasionally a longer depression period occurs, as in 1893 to 1895.

As the maladjustments preceding this recession were unusually great—including a highly unfavorable international situation—it is natural to find the duration of the current recession prolonged. By the end of 1930, it will have been approximately one and one-half years since the recession got under way. There is thus precedent for expecting bottom by the end of the year,—and no reason to be surprised if it does not come before then.

It is not possible to say much more. Business forecasting that is scientific (and no other kind is worth considering) is not sufficiently developed to enable any one to say when the next upturn will occur. Our data are too incomplete and there is too much arbitrary interference with economic forces by the Government and various business organizations. But it can be said that there is no strong reason why we may not hope for the beginning of sustained recovery by next spring.

On the other hand, there is as yet no conclusive positive evidence that recovery will occur then. It remains true that no upturn in the average price of basic commodities is yet evident, and no progress in reducing the stocks of various basic commodities (such as copper, zinc, and lead) has yet appeared. These two conditions are interrelated, and they are probably the most significant indications that the necessary process of liquidation has not yet been completed.

The heavy security loans of the member banks may also be mentioned in this connection. While "brokers' loans" have been sharply liquidated and have fallen to the lowest level since early 1927, the total collateral loans are still more than two billion dollars higher than in 1927. They are actually considerably above the level of a year ago. They are good evidence of the existence of frozen credit.

The total volume of the bank credit outstanding may not be excessive, but certainly too large a part of that credit is not liquid. Recent weeks have seen the beginning of a decline in collateral loans, but the process has not gone far enough, and such loans still constitute (1) a threat to security prices, and (2) a limitation of the possibility of business expansion.

The most favorable developments have been (1) a slight increase in factory payrolls in September, (2) a volume of department store sales that increased in September more than usual for the sea-

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son, and (3) an appreciable upturn in building activity. Taken together with the fact that the rate of business recession has become much slower, these developments suggest that the bottom of the recession is not far away.

The chief textile industries, considered as a group, though depressed, appear to be nearly ready for a turn. (As we have previously indicated, it is rather likely that the textile industries will be among the first to benefit by any recovery in general business, for the simple reason that they have been among the most thoroughly liquidated.) It will be noted that our estimated trend of the total *value* of textile output has fallen to a new low level, and is well below its average relation to wholesale dry goods sales. Moreover, department store sales gained more than usual for the season in August and September. These measurements are rough, but they indicate that the value of textile production is under wholesale sales, and that both are low in comparison with retail trade. Such a condition has always preceded an upturn in the textile cycle.

Cotton Mill Outlook Improved

The more encouraging aspects of the foregoing discussion are especially applicable to the cotton textile industry. It is true that the average price of southern mill stocks has continued to decline, reaching a new low in September; but earnings prospects show distinct improvement. Both the replacement margins of cotton manufacturers and our estimates of the actual margins earned, showed gains in September. In fact, it is now apparent that the trend of profit margins has been toward improvement during the last three months and this, together with the moderate increase in cotton manufacturing activity in September, means better earnings. The manufacturers have only to continue the present policy of curtailment a little longer to insure profitable operations, and *as stocks of goods and yarns are drawn down* production may be somewhat increased without breaking the market. Then will come the final test of the ability of the industry to learn the lessons taught in the severe school of adversity. As profits again arise, will cotton manufacturers be able to keep their supply adjusted to current requirements?

Wool Trade Still Hampered

The outlook for wool manufacturers in general does not seem quite so bright. The common stocks of a representative group show a steady downward trend. Despite lower raw wool prices, the decline in the composite average of wool textile prices has been sufficiently greater to indicate reduced replacement margins for the manufacturers. Our estimate of average earnings in the industry shows a decline in August,—the first time since 1923 that the estimate for that month has failed to increase. In our opinion, the wool manufacturing industry is hampered by an artificial market price for raw wool, and it seems doubtful if the industry can enjoy sustained prosperity until its raw material becomes more favorably priced.

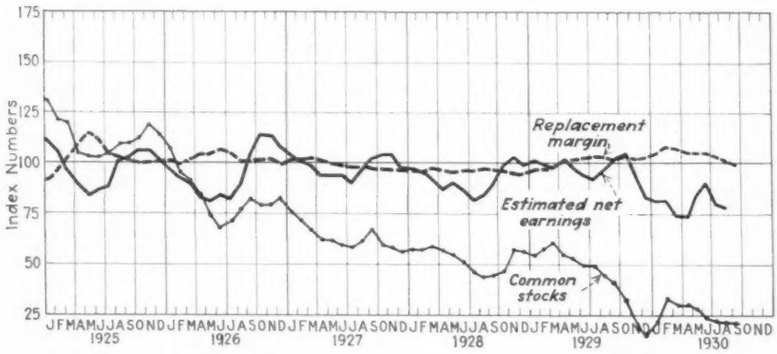
Index Numbers
175
150
125
100
75
50
25
Replacement margin
Estimated net earnings
Common stocks
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 1. WOOL MANUFACTURING EARNINGS AND WOOL MILL COMMON STOCKS—Net earnings in Wool and Cloth Industry —Computed from the estimated cost of raw material, labor, fuel, etc., the price of finished goods, and the volume of production (New York University, Bureau of Business Research). Replacement Margin—Computed from the cost of raw material and finished goods (New York University). Common Stocks—Average of a representative group of common stocks. Average 1923-1928=100 for all indexes.

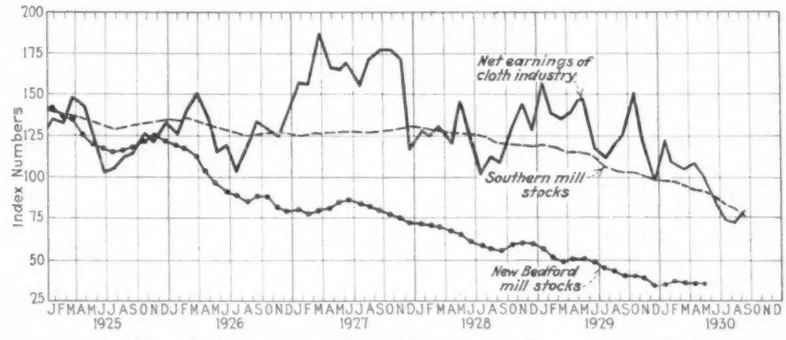
Index Numbers
200
175
150
125
100
75
50
25
Net earnings of cloth industry
Southern mill stocks
New Bedford mill stocks
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 2. COTTON MILL EARNINGS AND SECURITY PRICES—Net Earnings in Cotton Cloth Industry—Computed from the cost of raw material, labor, fuel, etc., the price of finished goods and the volume of production (New York University, Bureau of Business Research). New Bedford Mill Stocks—Average price 25 New Bedford cotton mill stocks (New Bedford Standard). Southern Mill Stocks—Average price 25 Southern cotton mill stocks (R. S. Dickson & Co.)

The Textile Trend

Cotton Textile Markets: Cotton goods are active and prices are advancing in the lines that have been selling in largest volume during the September-October buying movement. Sales of fabrics that were most active have not come up to that level this month with exception of coarser goods which were late in taking part in the improvement. The latter are selling as actively as last month. Heavy buying has been reported in 80 square percales, coming shortly after higher prices were named. Sellers are more independent than at any time in months; sales of print cloths are still in excess of production.

Wool Textile Markets

Grumbling at the weather man by wool goods houses seemed to have been justified. This week cooler temperatures resulted in prompt improvement in business with Fourth Avenue firms. The consumer, retailer and jobber seemed to be more willing to buy than last week, seeing seasonable clothing moving more freely into consumer hands. New dress goods lines for spring in nubby and crepe effects have been selling in good volume. Lace effects are wanted by many buyers of spring woolens. Specifications of worsted yarns larger but new orders smaller.

Knit Goods Markets

Cold weather stimulated call for knit goods, and outlook has improved. Heavyweight underwear and heavyweight sweaters are in comparatively good position, with mills oversold. Spring underwear moves unevenly; certain firms enjoy satisfactory call and

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Amaray

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125 colors—solid or in various combinations—are offered in these yarns. Knitters are using them with telling effect in creating unusual hosiery, bathing suits, sweaters, jersey cloth, underwear, etc.

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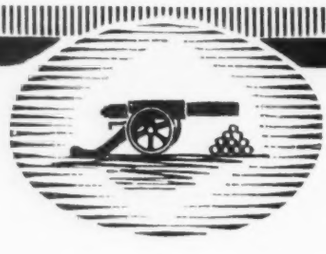
AMERICAN ENKA RAYON

Sales Agents for
IMPORTED DUTCH ENKA RAYON
for the Southern States

Utica, N. Y.
Chattanooga
Kannapolis, N. C.
Hamilton, Ontario
Canada

CANNON YARNS



some are in a better position than this time last year, but most are picking up slowly. Mills ask ten days for sweater shipment, and another month of steady buying is looked for; bathing-suit movement has slackened. Half-hose selling well, especially low-priced synthetic yarn numbers retailing at 25c. and 35c. The 50c. lines are sluggish, but demand for 75c. pure silk has increased. Women's full-fashioned, both tram and seamless in good call, with mills sold ahead but prices are still uncertain.

Silk Textile Markets

Raw silk continues to hold its own and futures are perhaps firmer than last week. Manufacturers still lack confidence, and buy chiefly for immediate consumption. Japanese weakness prevents strengthening in New York market, for a few days, but Japan became firmer latterly. Thrown yarn moves conservatively, with orders larger than last week; demand for grenadine yarns has increased and broadsilk mills buy four weeks ahead on crepes. Spun silk fair, with prices uncertain. Broadsilk movement was accelerated by cold weather and weavers did active business this week. Flat crepes and crepe satins moved spiritedly, but mostly at the low-priced end. Chiffons are active, with prices soft. Cutters are sampling spring flat crepes and the $1.65 and $1.75 satins are in good call for party frock manufacture.

Cotton Now Holding Steady

Little Cold Wave Damage and More Optimistic Trade Outlook

THE cotton market has been comparatively quiet, but has shown a generally steady undertone during the week. Developments at the Columbus Day conference in New Orleans, appeared to have strengthened investment sentiment; not to the point of aggressive buying, but sufficiently to bring in an increased demand on the declines. This absorbed rather an increased volume of hedging, and might, perhaps, have become more active had it not been for unsettled conditions in the grain and stock markets. The latter, of course, is watched as a barometer of the general trade outlook, while shrinkage in the value of collateral invariably has rather a disturbing effect which finds an expression in the commodity markets.

Nevertheless the talk of ultimately higher prices has been more general and there is evidently a strong impression in many quarters that if cotton does not advance in the meanwhile, there will be such a reduction in acreage next spring as will insure higher end-season values. This view is shared by the trade as indicated by the scale down buying which has a sustaining influence on the market for the past several weeks, but in a general way, buyers are as yet unwilling to follow advances and appear to be waiting for more settled conditions in the outside markets, a clearer shaping up of the business outlook and a diminishing volume of cotton coming to market.

The first serious frost threat of the season developed toward the end of last week. Light to heavy frosts have been reported at scattering points all along the northern part of the belt and to some of these points temperatures have been down to the freezing point. It appears, however, that the crop has escaped any damage of consequence and toward the end of this week the weather was moderating. There has been some complaint of damage to grade and of some delays in picking, but it is believed that ginning has made good progress and traders here were looking for full figures from the Census Bureau on the outturn prior to Oct. 18. This report will be published today (Oct. 25) with ginnings somewhat in excess of 9,000,000 bales anticipated.

The percentages of the total crop ginned prior to Oct. 18 during the last six seasons have ranged from 49.2 to 63.5 and average 57.8%. The ginnings prior to Oct. 1 this year represented 44.1% of the crop of about 14,286,000 running bales indicated by the Government's Oct. 1 forecast of 14,486,000 bales of 500-pounds gross. The average percentage ginned prior to Oct. 1 for the last six years was 38.5. The trade, however, is showing comparatively little interest in the possibility of late season revisions in the crop figures and is devoting its entire attention to the rate of marketing in the south and the development of trade conditions.

More cheerful reports have been reaching the market from the textile situation. Manchester has reported a better business from both India and China and Lancashire Cotton Corp. is starting up some additional mills because of the better demand for coarse yarns. There have also been reports of somewhat increasing mill activity in the Carolinas due to the larger sales made recently. While these features may not represent anything much more than a seasonal improvement, but they have encouraged the view of cotton as an investment and there has been increased demand from both domestic and foreign spinners during the last week.

In some cases, these interests have been buying May and July contracts in New York, while it is said that some mills are making contracts for deliveries two or three years ahead. Such business, of course, cannot be general, but it is helping the general undertone of the market while it was pointed out at the end of the week that present premiums on late months are sufficient just about to cover carrying charges at the present price and present money rates. This is said to have led to freer buying of spots by merchants in the South against which hedges have been sold, accounting partly for the increased volume of such business recently. The holding movement continues and deliveries of cotton to cooperatives are said to be running far ahead of last year's.

More Activity in Memphis

Memphis, Tenn., Oct. 20—Sales of cotton here during the week were 3,634 bales above the total for the previous week, due to a spurt of activity during the last two or three days. Demand centered on $\frac{1}{8}$ to $1\frac{3}{32}$ in. middling and strict middling, but shorter cottons were ready sale 25 to 50 points below quoted values.

Staples were in better demand than heretofore this season but actual sales were limited owing to the low basis offered; for instance, middling $1\frac{1}{8}$ in. was quoted officially 60 points on, while buyers were offering 25 points on and getting some cotton at that figure. Strict middling $1\frac{1}{8}$ in. staples were officially quoted 100 points on new Decembers, 25 points off from the previous week; $1\frac{3}{16}$ in. 275 points on, 25 points off from the previous week; $1\frac{1}{4}$ in. at 800 on, was unchanged. Cotton in the interior is selling 10 to 35 points below Memphis quotations. The relatively full basis offered for staples longer than $1\frac{3}{16}$ in. is due in part to the tendency during recent years to plant sparingly of the longer staples, to the fact that staple lengths were reduced by drouth and due also to the belief that Egyptian uppers will be largely replaced by domestic products, owing to the 7c. duty.

First hands, as a rule, are reluctant to sell; buyers insist they are still without any important volume of forward business. The weather during the week was only moderately favorable for field work. The effects of recent rains are beginning to be reflected in the quality of receipts. The color is bright but the superior color noted in earlier receipts is gone.

◆Larger Business in Cotton Wastes

THE cotton waste business in Boston continued to show signs of improvement this week both as to the number of inquiries and the volume of business transacted. The bulk of de-

SANÇONIZE THE NEWEST YARN

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GIVES POPULAR PRICED UNDERWEAR A NEW BEAUTY

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SANÇONIZE *Brand* YARN IS A NITRO-CELLULOSE YARN MADE *by the* OPĀKE *Process*

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THIS new yarn has been developed to meet the demand for a *medium toned lustre* in both women's and men's underwear. It imparts to the cloth made from it a *fresco-like finish* different from anything previously shown—duller than Tubize yet not so dull as Chardonize.

These important characteristics are inherent qualities of the yarn obtained by the patented Opake process and will remain long after the usefulness of the garment is outlived.

Sançonize is a rugged, uniform yarn, yet soft, fine and flexible. It has remarkable covering qualities and runs well when in work.

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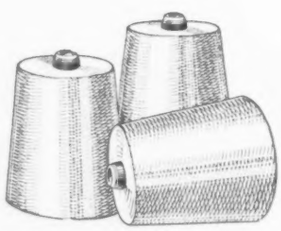

Tubize Chatillon Yarns are manufactured by the Acetate, Nitro-Cellulose and Viscose processes—Synthetic Yarns for every purpose.

TUBIZE CHATILLON CORPORATION

TWO PARK AVENUE · · NEW YORK CITY

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mand was centered on spinnable materials and threads, although there was a fair movement of stuffing wastes also. There are no large stocks of peeler comber hanging over the market and this has encouraged sellers of this waste to hold prices firmly. It was extremely difficult to obtain New Bedford No. 1 comber under 9⅛c. this week, whereas two weeks ago this waste could be bought at around 9c. or slightly below.

Attention is becoming directed to the new contracting season, which usually starts up in the South the latter part of October or early November. The year to date has been a very poor one for members of the trade, possibly the most difficult for successful merchandising since the war, and they may be expected to exercise extreme caution in contracting for their waste supplies during the coming year.

Firmer Trend in Cotton Yarn

Confidence Among Buyers Being Developed Again

ALL laws are not being enforced but we cannot get away from that of "supply and demand." Changes in cotton yarns over the last week show that lack of supplies of many counts is having a noticeable effect. An example of this is in prices of 16s-2 weaving, carded quality. This number is actually selling at higher prices than 20s-2.

One house reports the sale of 20s-2 warps of ordinary quality at 21½c., and, at the same time, asserts that they have been able to move 16s-2 in slightly better yarn at 23c. This means that supplies of 20s-2 are larger than less popular counts while demand is relatively less than for the most active counts. Dealers are not replenishing stocks rapidly and prices of the popular spot yarns are strong for that reason.

Market in Good Shape

Total volume of sales for the week has been large but not up to best week of September. October will be a good month for shipments, one of the best of the year and fully equal to September. The latter was best of year so far in this respect so that spinners and dealers have no complaint on this score this month, although they do have grounds for complaining that September volume did not continue.

This too seems to be trending in a direction that is favorable for sellers and groundwork is being laid for a resumption of active contracting next month. Shipments on September business are proceeding at a healthy rate and by the time next month comes around many of these manufacturers will again be in need of new contracts. This is more likely to be the case with weavers than with knitters.

Weaving Sales Lead

Sales of carded weaving numbers have been in the lead again this week, larger in total than knitting sales. Yet it should be remembered that deliveries are being made at better rates on knitting contracts and these manufacturers are booking a larger goods business than was true early in September.

September volume was large, aside from seasonal influence, because manufacturers felt the bottom of the decline in cotton and yarns was at hand. Now, after a period of several weeks of doubt this attitude is being further confirmed. During the last week or more, cotton has changed in price very little; in fact, a degree of firmness has developed. This will bring manufacturers into line who have not bought heavily yet and will cause those whose contracts are expiring to renew.

Firmness in the raw material has had an effect upon yarn quotations and sellers are more inclined to wait for their own price ideas than last week. Yarns have changed little in price over the last week. There has been little indication that they were likely to go higher in near future, but at the same time the feeling of recent weeks, that they were headed downward, has been largely removed. A feeling of confidence has developed and is seen in good spot demand, a fair amount of continued forward contracting and excellent deliveries on old orders.

Larger Mercerized Sales

There has been improvement in mercerized yarns of importance for the first time in months. Processors have booked new contracts in fair volume calling for shipments to be made several months ahead. These show that manufacturers are confident prices will not go lower and probably will advance. They have substantial orders on mercerizers' books already, and would not have placed additional orders unless this were so.

Mercerizers have a large volume of forward delivery business, and, while specifications are larger, much improvement is still needed before the situation is in good shape. Unless this is brought about there will be continued apathy in buying of combed yarns. This holds true this week although there has been a fair interest in single combed for knitting. Even here the total is subnormal for this time of year.

Better Margins In Cotton Goods

Higher Prices Are Named While Cotton Hesitates

AFTER a short hesitation the cotton goods market is going ahead with renewed vigor and while sales were not up to the September volume business was good this week. As sellers become sold up further ahead they are assuming a more independent position and gradually raising prices. They no longer accept the first offer made.

Goods prices are up approximately a cent from their lowest point and advances were seen late last week in print cloths and carded broadcloths. The latter are up ¼c. from last week and have been well sold into next year at the better figures. Heaviest buying has been in 80/80s, coming at the same time large printers announced advances.

Advances Inevitable

Firmness in goods has taken place at a time when the cotton market was marking time so that any change in an upward direction has meant that cotton goods manufacturers are that much better off so far as margins are concerned. This was indicated after large sales of print cloths during recent weeks. In view of the fact prices formerly were under cost, such a tendency was inevitable.

In carded broadcloth, 80 squares have advanced from 7½c. to 7¾c. and several houses state they have been able to sell at 8c. for spot delivery. Buying has been of substantial volume in these lines; deliveries to run well into next year are specified.

Although the business was not equally distributed there has been a large amount of broadcloth buying with deliveries to end of the year asked for; 100 x 60 sold for 8c. and 112 x 60 at 9½c. for those shipments. Sellers are refusing in numerous instances to take contracts for first months of next year at these figures.

Coarser Goods More Active

Print cloth sales although good do not equal best weeks in September, which to date was the fall buying peak. A different story is reported in coarser fabrics. Houses specializing in these

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state that present volume is up to September, going along at that rate during the last three weeks. Their business was not so much better in September but it is coming along now to make up for this lateness.

Wool Market Moves Sidewise

Domestic Stabilization Effective For Months— Only Minor Concessions Likely

WOOL dealers on Summer Street are not so confident of the raw material position as they were at the beginning of the month, impressed to some degree at least by lower markets developing at the primary centers and certain to be confirmed at the opening of the South American and New Zealand seasons. This depression is deepened by the goods market which lacking confidence to do any substantial business on its own account is using some of its surplus energy in attempting to pass along through the various trade channels to the wool market the notion that current wool values are too high for successful manufacturing and merchandising and that a slump in values might be highly beneficial. The market is however convinced that wool is on a low basis, and yet as supplies are more than adequate to the mill purchasing taking place some slightly downward trend may be set up in the near future.

Wool prices on Summer Street have for many weeks been running sidewise. It may also be noted that the general commodity price level since July has been moving similarly with wool and from past experience such stabilization occuring after a long continued decline is usually followed by an upward price movement.

The independent wool trade is quite indisposed to cut prices on the possibility of thereby securing a large patronage from manufacturing interests and so far as the National Wool Marketing Corporation is concerned there has been no departure from its policy of price maintainance. Although receipts of domestic wool into Boston this year has been larger than for several years there has been a very good clearance, stocks of independents having been more than half sold with large business done also by the Cooperatives. Widespread rumors to the effect that the National Wool Marketing Corporation had been selling large quantities of wool well below the market were denied by Draper & Co., Inc., who stated that they were making every effort to keep wool prices on a steady level.

Foreign Wools Lower

The amount of crossbred foreign wool in bond in Boston is quite small, some of it there for a considerable period, showing the importers heavy losses. Quotations have been revised downward from time to time and yet in the opinion of some importers are considered to be well above the incipient market developing on near approach of new season openings in South America and New Zealand. Offerings of small quantities are now being made by foreign houses 2c. per grease pound lower than prices asked for similar wools in bond. There is a general feeling among consumers, chiefly perhaps outside the United States, that even at current rates crossbreds are too dear in comparison with merinos and the opening of the new season is awaited with keen interest.

Reworks Attractively Priced

On recovered wools carbonized and carded there is such a wide range of qualities made up in the trade under the name of any particular grade that it is difficult to make quotations that would cover every case. Some strictly high grade reworks are quoted as follows: white knit, 50c.; light hoods, 31c.; fine light merino, 32c.; course light merino, 21c.; blue and black serges, 22c. Reworked materials less carefully prepared are obtainable 2 to 5c. below.

Business is arriving on a restricted basis. There seems little doubt that the trade engaged in packing and grading woolen rags has added its full quota to the unemployed class. Prices on graded rags show no comeback. Mills can buy fine light merinos and light hoods on a ridiculously low basis and yet show no disposition to speculate. The Dewsbury woolen rag district is passing through the worst depression experienced since the slump in 1921. Very little substantial repeat business is being received and orders coming in are strictly for immediate requirements.

Wastes Moderately Firm

There is no bulk business at this time in the wool waste market and the total turnover is hardly sufficient to establish a definite basis. While cheap clothing and blanket wools are depressing waste prices in the Bradford market the situation in Boston has not quite reached this point and yet it is a possibility to be faced. The local wool market is strong on its combing wool, but for weeks its woolen wools have been unsteady with low prices seen on pulled, scoured and clothing wools in the grease. The supply of mill wastes flowing into this market for the last six months has been chiefly in half-blood and fine qualities. Dealers are not looking for any lower selling price on the stocks they hold and yet are rather reluctant to purchase additional quantities either in the market or from producing mills except at what they would consider safe concessions. Producing mills on the other hand who for the past four or five months have been unable to buy wool on any lower basis are naturally indisposed to let their wastes go at lower prices. Movement in imported thread wastes is very moderate. The lifting of the tariff from 16c. to 25c. has done nothing in the way of bringing about a higher selling level for the thread, imported in anticipation of a rise in values.

Fine Noil Supply Adequate

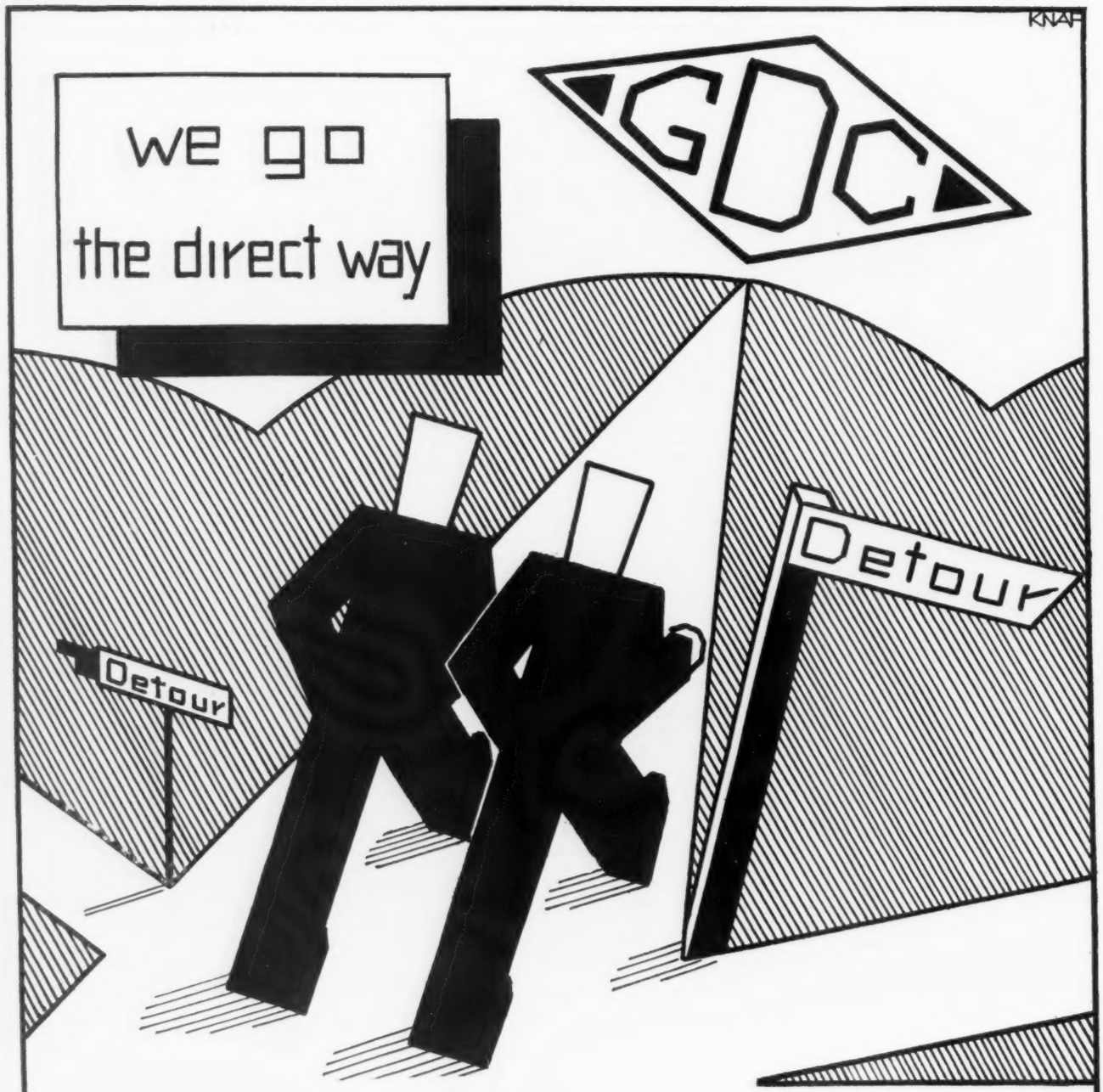
Prices on all sorts of noils are without change for week. Incoming business continues very small. Stocks unfortunately are not getting any smaller, it is even likely they are accumulating in the merino and near-merino qualities. The mills of the country have used a large amount of fine wools this year; even though total wool consumption is far behind that of a year ago the consumption of the fine combing wools has shown a large increase. The combing of these wools has resulted in a steady supply of fine domestic noils both from the English and French systems. The supply of noils from the combing of fine Australians and Capes has however, been distinctly below normal.

Worsted Yarns Seek Stability

Outerwear Counts Are Now Firm at Lower Level

ALTHOUGH spinners anticipate more active inquiry from cooler weather this has not been apparent as yet. Specifications are coming in better but new business has been disappointing in volume this week. Weaving yarns are coming in for more attention, while knitters are now taking their yarns less actively.

Lateness in arrival of winter temperatures will cause a longer buying movement in outerwear counts and spinners instead of expecting the end of spurt in their yarns early in November,



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are predicting that entire month will be a good selling period.

Cold Weather Helps

Movement of goods into consumer hands in larger volume, lately retarded because of warm weather, will encourage manufacturers to place new yarn orders that they were holding in abeyance. This is expected to become more apparent next week in yarn demand.

Competition is keen even in outerwear yarns which have been the most active within the last six weeks, and spinners have lowered their prices generally to the new level, majority now quoting $1.02½ for 2-20s, 50s. Several did this early last week and others have been following late last and early part of this week. Knitters are now being quoted that figure, and a few claim to be buying at $1.00. Yarns supplied on such orders are generally not up to $1.02½ yarn in grade.

Knitting Yarns Cheaper

Reduction in outerwear counts caused a buying wave of limited proportions for a few days, but it has not continued and at present spinners are operating at slightly less active rates than they were last month. The lull is felt to be temporary until buyers are sure that prices are staple at the lower level. When this has been established, buying may be resumed, although possibly not at the September rate.

Because of continued mild weather, much of the business in heavy sweaters has probably been lost this season. We shall probably go direct from lightweight sweaters to overcoats, and the shaker business will thus lose much of fall volume.

Yarns being used in ensembles and other dress goods lines have become quiet. New business in 2-40s, 64s, zephyr qualities, is conspicuous by its absence.

While outerwear yarns are less active the reverse is true in weaving although the change has not been an important one so far as actual volume of sales is concerned. There is more inquiry and a larger number of small sales have been made. Prices are uncertain at the best, many spinners of weaving counts, both English and French, are after offers. When a lower offer than market level is made a small order at lower level results.

Men's Wear Inquiry Better

Men's wear yarns are trending upward so far as demand is concerned, while dress goods counts have probably seen their peak for the present season and will await development of next season lines before showing marked expansion in sales. Men's wear lines are moving better in small lots and manufacturers are buying yarn in the same manner. Contracts are not being placed, but in their absence spinners report a larger number of small sales.

Indications are October will be a less active month for both weaving and knitting spinners; but to offset this there are signs that November will be a much better month than the present one. Cold weather and stabilizing of prices at a slightly lower level may achieve this.

◆Cool Weather Helps Wool Goods

MORE seasonable weather this week has had a prompt and decided effect upon the wool goods markets. It caused a better feeling within a short time and this in turn is having an effect upon manufacturers, jobbers and the entire trade. Goods are beginning to move in larger volume although this is more noticeable in women's wear than in men's.

New lines of women's wear that have been recently opened are the most attractive that have been shown and there is a feeling in the trade that instead of woolen and worsted dress goods having already climbed to peak demand, they are still on the up-grade. Next spring goods are expected to sell in much better volume than the previous one.

Nubby Effects Popular

Crepes and nubby effects for coats, cloaking and ensembles in attractive colors are selling well for next spring wear. These lines show the marked degree to which designers have gone to secure the mottled effects that sellers believe will continue to be so popular. Many of the new woolens for spring have been decorated with rayon.

Of the colors, white and black have the preference and many sellers believe this will continue to outstrip all other color combinations. Many of the new woolens have been designed so that by reversing the goods attractive combinations may be secured for pockets and other decorations on the coat or suit.

Dress goods fabrics are selling in both woolens and worsteds but fancy effects seem to be preferred in the former while more staple lines of dress goods are wanted in worsted materials. If there is any difference in selling volume, orders favor woolens at the present time. Lace fabrics are especially attractive in the new woolens.

New materials are 6½ to 7 oz., for lightweight dresses; fabrics used in ensembles are 9 to 12 oz.

Men's Wear Season Slow

Should the cooler weather continue men's wear houses look for more substantial improvement in demand than has been seen this week. Warm temperature was the main reason initial business had been delayed. No sudden spurt is looked for but a gradual improvement may be expected.

Spot Raw Silk Advances

But Decline in Futures Equalizes the Increase

A SHARP upcurve in demand from weavers has acted as a tonic to the anaemic raw silk market, and nearby prices are 10 to 15c. above last week. Futures continue soft, and show a decline almost equal to the rise in nearbys. The call by broadsilk mills is chiefly for 20/22s, and importers have difficulty in filling orders. This has forced mill men, much against their will to buy a few weeks ahead. Raw silk is not too plentiful in any grade; importers have been cautious in purchases, due to the uncertainty of turnover, with the result that the current spurt in buying created a temporary scarcity. Hosiery mills buy sparingly, some because of doubt regarding prices and some because they are already covered for most of the winter.

Importers are skeptical about the present firmness; previous indications of strength in raw silk have disappointed them so persistently that now they refuse to get enthusiastic, even when demand is favorable. Conceding the possibility of another set-back, it may be said that silk is in a better position. Manufacturers are more confident and, while much of the present rush to buy is largely speculative, there is a stronger undertone. One of the chief reasons for skepticism is that the Japanese situation has not altered materially. Surplus stocks still threaten the market, and indeed there were reports in New York that Japan's surplus has increased several thousand bales in the past week. However, weakness in buying by weavers was one primary cause of the decline and with the weavers apparently in a more optimistic mood, the market has a legitimate reason for firming.

The raw silk market now has enjoyed two weeks of comparative steadiness, and with the broadsilk industry so confident regarding spring season prospects, the outlook for the raws is encouraging. Heavy buying and big-volume production by weavers is causing some concern among importers who reason that overproduction by the mills will merely redound to the disadvantage of raw silk in early spring as weavers would have a heavy carry-over of stocks and would stop buying once more.

On the Exchange

The week opened with futures steady, but no great demand. Strength devel-

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oped in Yokohama and Kobe and brought a slight advance in futures which was lost the following day. Futures grew weaker Saturday and failed to rally Monday or Tuesday. There were indications of a recurrence of strength in Japan. Spots were in good condition all week, due to broadsilk mill interest, and there was a steady turnover.

◆Silk Yarn Outlook More Promising

SILK yarns are in a better potential position, with sale prospects improved but buying still cautious. Throwsters report a light steady call from hosiery mills; these knitters are buying trams and grenadines in about equal measure and there is talk of an early shortage of grenadines. At present, supply is adequate, but hosiery yarn demand is behind normal, and any lively pick-up in call for grenadines would make shipment for immediate use, a difficult proposition. Broadsilk mills also buy thrown yarn steadily, some covering four to six weeks ahead on crepes. Weavers are more confident and throwsters look for further improvement at that end. Stocks of crepe yarns in throwing mills are light and weavers are obliged to wait for deliveries.

Manufacturers make numerous inquiries regarding spun silk, but actual buying shows little improvement. All orders are small, and there is little interest in futures. Spinners are in a satisfactory position for the most part, as they booked considerable fall business two months ago. Spun yarn stocks both in producers' and users' hands are moderate. Style importance of shantungs for spring is expected to bring spirited demand for yarns.

◆Cool Spell Quickens Broadsilk Movement

THE long-awaited cool weather has had a quick and favorable effect on broadsilk sales. Both cutters and retailers were much in evidence at the New York showrooms of the mills this week, and buying took an encouraging spurt. Flat crepes and crepe satins, mostly the 85c. lines, were in good call; these fabrics are going into spring coats and offer unusual value at prevailing levels. However, price is a minor point in current buying; garment manufacturers will place business only when they are actually in need of goods for immediate use, irrespective of concessions. Buying is all confined to small orders, however, and quick delivery is asked.

Weavers Hopeful

Weavers who last week had begun to look at the fall season as a past proposition due to the warm weather having slackened all sales, now take on more life. If the current cool weather continues for a while, fall fabrics may continue to move for 30 days. This prolongation of the fall season would be a decided help in building volume, but the sales total cannot reach anything like last year's figures.

Chiffons Active

Chiffons in high colors are selling steadily, but prices are so weak that the business brings little satisfaction to mill men. Cantons have eased somewhat; certain large firms are still sold ahead, but cutters are beginning to lose interest.

There is at present active sampling of flat crepes for spring, and the satins in high shades—mostly the $1.65 and $1.75 ranges—are selling well for party frocks. Broadsilk firms see a possible rise in satin demand about December which would mean good business for some houses.

Rayon Demand Slackens

Maze of Price-Cutting Rumors Makes Manufacturers Hesitant

PRICE uncertainty in the rayon yarn market has made manufacturers hesitant, and orders have slowed up considerably. Underwear mills, which were buying with some assurance a couple of weeks ago, are less confident, and most current business from this group is for spot shipment. Cotton weavers continue to buy, but on a moderate scale. A large percentage of present orders comes from the hosiery trade, and some rayon producers are selling into December, for half-hose production. The general practice of hosiery mills is to request that a specified poundage be shipped weekly until further notice; the future coverage is the exception rather than the rule, as mills are still doubtful what will happen to yarn prices, and want to protect themselves against a possible revision.

Conditions in the yarn market are far from ideal. Prices are generally weak, and though large companies make some effort to hold to list, even these firms can be persuaded to make concessions to effect turnover. Buying is so far below normal that yarn manufacturers find themselves up against a serious proposition as regards stock accumulation. There were indications this week that the existing surplus of yarn is increasing. Certain producers have eased up on output, and a few are down to 80%, but the bulk of the firms are operating at capacity. This insistence upon 100% production is perhaps a major element in creating the current weakness. Output is well beyond demand at present, and rayon companies are compelled to shade their prices to move stocks. Producers are devising all kinds of ingenious ways of shading prices, without making the cut too obvious. The actual amount of the reduction offered is not great, from all reports, but it is so involved in special concessions and special privileges that the market is in confusion. The reaction of the manufacturer, naturally enough, is to hold off on buying.

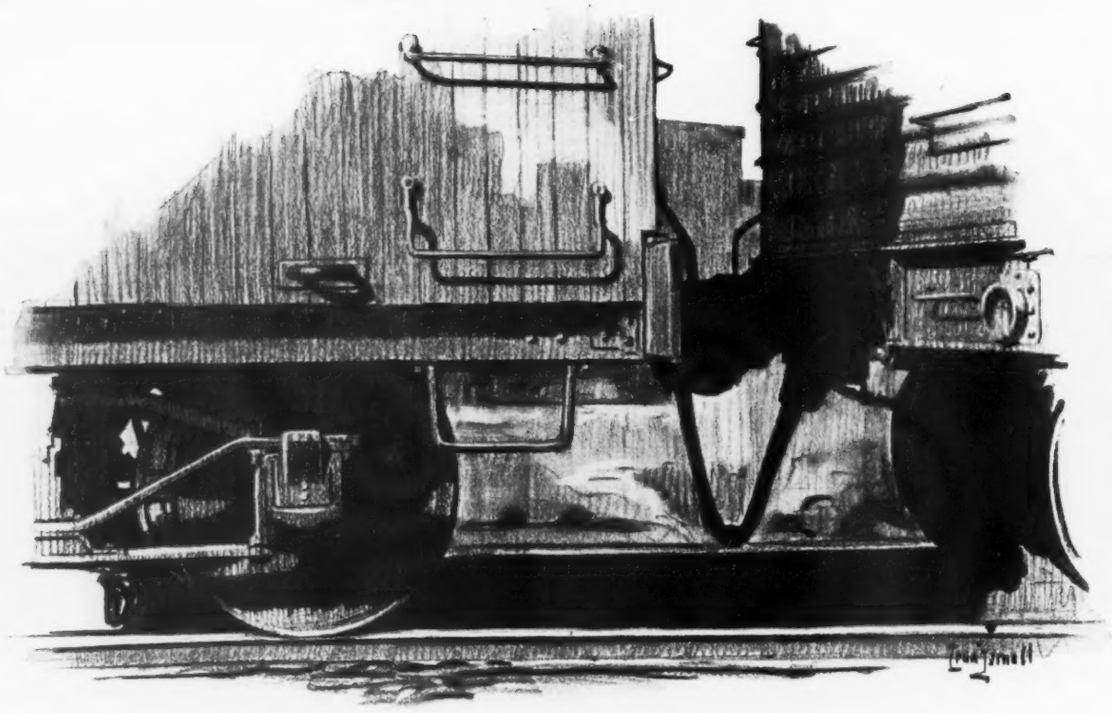
Rayon Waste Improves

Manufacturers are showing more interest in rayon waste, and prices are somewhat firmer. There is a good call for open waste; substantial quantities are changing hands, and dealers have little trouble in getting list prices. Available stocks of open waste are limited and as the buyers invariably want spot delivery, the situation tends to favor the seller. Thread waste is soft; manufacturers want to buy, but refuse to pay more than 8c. per lb., and dealers are holding out for 11c. A certain amount of business has been placed at 9-10c., but this is below the prevailing price. Dealers seem more encouraged and are offering greater resistance; they regard the outlook as improved.

Cold Snap Aids Knit Goods

Winter Underwear, Heavy Sweaters in Better Position

THE belated arrival of cold weather has brought cheer to the knit goods industry and while it is too early to gauge the effect in sales, the outlook is considerably better. Mills in all divisions are resigned to an off-year, and will be grateful if they squeeze through on the comfortable side of the ledger. Actually, certain groups are in a comparatively good position. Heavyweight underwear manufacturers are producing at capacity and selling everything they produce; some firms have caught up with orders, but the industry could not



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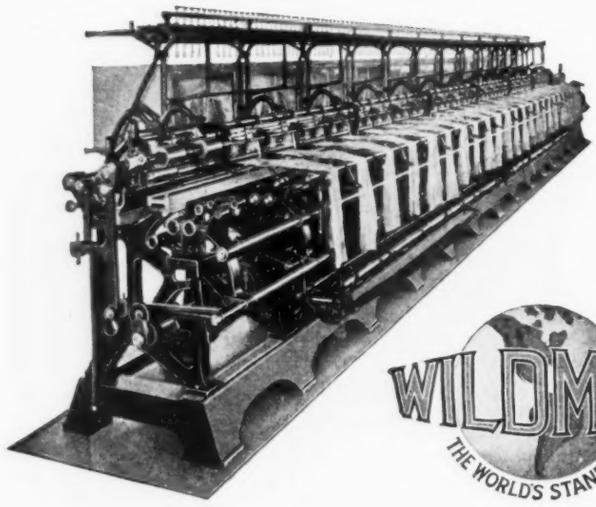

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be said to be on spot basis; numerous mills ask two weeks for deliveries.

Heavyweight underwear demand is expected to keep up for another eight weeks; current buying is limited to small orders, but there is plenty of these, and mill men note a tendency toward buying in larger quantities. Spring cottons move unevenly; certain Worth Street agents said they were in good shape and several even claimed booking to be ahead of this time last year; in most cases, however, business is picking up slowly.

Sweater Mills Active

Sweater mills are enjoying a good turnover. The balmy weather of early October tended to slacken movement of heavyweight sweaters, but buying has picked up of late, and the market is in a firm position. Mills are asking 10 days to two weeks for sweater deliveries. Stocks in mills are small and knitters assert that two weeks of cold weather would bring a rush of orders which they could not fill; in that case, buyers would be lucky to get shipments four weeks after buying, as there is little surplus stock. Bathing-suit buying has eased off, but mills are in a fair position at that end. Sweaters continue to dominate in production, and will hold their lead probably for another month.

Low-Price Half-Hose Moving

Half-hose are selling well, and mills are many weeks behind in shipment of popular-price lines. Production is on capacity basis, and there is little stock available, either in the hands of distributors or in mills. The call is mostly for synthetic yarn numbers, retailing at 25c. and 35c. There is little interest in 50c. goods. The pure silk half-hose staples retailing at 75c. has improved, and there is considerable spot activity at that end. Jobbers buying popular-priced goods emphasize plain patters in clocks; dark colors are the rule. Women's full-fashioned silk hosiery also is moving well, and mills are several weeks ahead on orders.

Quiet Week in Security Markets

Bigelow-Sanford Passes Dividend on Its Common Stock

CONTINUED quiet features the financial markets. Fair stability has been shown by some stocks in face of declines of others. Efforts toward mergers still hold considerable attention.

Offer for Bristol Stock

Jerome A. Newman of New York City has made a tentative offer of $39 per share for the outstanding capital stock of the Bristol Mfg. Co., plain and fancy cotton and silk goods, New Bedford, Mass. The offer will be made definite when an audit of the books of the corporation is completed and the condition of the company is found to be as represented. The company is capitalized at 10,000 shares of $100 par, and as of September 28, 1929 had "net quick" of $36.64 per share, not including investments carried at a value of $24.12 per share of Bristol stock. The stock has been selling recently at $25, but the present open market bid is around $35. It is understood that Mr. Newman will continue operation of the plant if his offer is accepted.

Bigelow-Sanford Passes

Directors of the Bigelow-Sanford Carpet Co. have voted to pass the regular dividend on the common stock usually paid Nov. 1. The company had been paying at the rate of $6 per share since May, 1924, following payment of a 50% stock dividend in March of that year. Commenting on this action in a letter to stockholders, President Sweetser said in part: "The condition of the carpet industry as a whole has continued at levels well below normal for the past several months. In view of this situation with consequent decreased sales and earnings, your directors deemed it advisable to temporarily suspend the payment of dividends on the common stock. Since Jan. 1 cash has been increased by $2,132,207, total liabilities have been reduced by $3,440,018 and inventory reduced $5,407,363. The acquisition of the plants of Stephen Sanford & Sons, Inc., has made it possible for us now to offer the trade a complete range of Axminster and velvet rugs."

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
50	Associated Textile..	...	35–36½	.....
50	Sanford, com.....	100	34½	—12½
50	Naumkeag.....	100	80–84	.....
2	Dartmouth, com....	100	34½	.....
9	Pepperell.....	100	85½	—1½
80	Nashua, com.....	100	12½	—9½
16	Harmony Mills, com.	100	1	—2½
257	Total			

Quiet Trading in South

CHARLOTTE, N. C.—A decline of 12c. per share was recorded in the average bid price of 25 common stocks of southern cotton mills for the week ended Oct. 18 according to the report of R. S. Dickson & Co. The close of the week stood at 63.60 as compared with 63.72 for the previous week. Trading continued quiet in both common and preferred stocks and only a few issues were in demand at prices practically unchanged from the last several weeks.

MILL STATEMENTS

Name and Address of Company	Line of Business	Fiscal Year	Assets						Total	Liabilities and Capital		
			Cash and Debts Receivable	Raw Materials, Mdse., Etc.	Total Quick Assets	Real Estate, Buildings and Machinery	Miscellaneous Amount	Miscellaneous Description		Accounts Payable, Floating and Funded Debt	Capital Stock	Surplus Profit and Loss, Reserves, Etc.
Wuskanut Mills, Inc.	Wool	Dec. 31, 1929	$2,660,304	$262,640	$2,922,944	$96,765	$		$3,019,709	$235,933	$1,000,000	$1,783,776
Farnumsville, Mass.		Dec. 31, 1928	2,628,448	210,879	2,839,327	97,207			2,936,534	125,840	1,000,000	1,810,694
S. Slater & Sons	Cotton	Dec. 31, 1929	1,678,237	222,544	1,900,781		1,609,897	Miscellaneous	3,510,678	413,237	2,100,000	997,441
Webster, Mass.	& R'n	Dec. 31, 1928	1,463,514	218,845	1,682,359		1,606,475	Miscellaneous	3,288,834	165,301	2,100,000	1,023,533
Hoosac Cotton Mills	Cotton	Dec. 31, 1929	174,498	476,088	650,586	1,635,040	157,448	Miscellaneous	2,443,074	218,372	1,350,000	874,702
No. Adams, Mass.		Dec. 31, 1928	286,767	470,137	756,904	1,635,040	36,074	Miscellaneous	2,428,018	64,197	1,350,000	1,023,821
Fisher Mfg. Co.	Cotton	May 31, 1930	733,280	303,279	1,036,559	546,912			1,583,471	25,226	750,000	808,245
Fisherville, Mass.		May 31, 1929	775,006	415,163	1,190,169	553,495			1,743,664	31,236	750,000	962,428
The Felters Co.	Wool	Dec. 31, 1929	957,190	1,036,490	1,993,680	1,350,679	16,678	Prepaid Exp.	3,361,037	78,445	2,000,000	1,282,592
Boston, Mass		Dec. 31, 1928	861,208	1,083,401	1,944,609	1,370,236	19,095	Prepaid Exp.	3,333,940	86,675	2,000,000	1,247,265
Apponaug Co.	Finish-	June 30, 1930	1,715,594	120,740	1,836,334	1,562,684	686,035	Miscellaneous	4,085,053	159,795	1,719,500	2,205,758
Apponaug, R. I.	ing	June 30, 1929	1,691,152	144,294	1,835,446	1,522,335	211,154	Miscellaneous	3,568,935	114,494	1,900,000	1,554,441
Channing Smith Textile Corp.	Wool	Dec. 31, 1929	28,497	354,681	383,178	683,898	57,494	Miscellaneous	1,124,570	401,807	450,000	272,763
Cherry Valley, Mass.		Dec. 31, 1928	112,874	283,199	396,073	693,154	59,383	Miscellaneous	1,148,610	420,996	450,000	277,614
Franklin Rayon Corp.	Rayon	Dec. 31, 1929	363,906	592,017	955,923	434,298	23,096	Miscellaneous	1,413,317	391,554	986,960	34,803
Providence, R. I.		Dec. 31, 1928	377,018	685,884	1,062,902	427,247	15,399	Miscellaneous	1,505,548	619,719	861,295	24,534

QUOTATIONS

at close of business, Oct. 22, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	Oct. 22	Oct. 15	Oct. 23 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60	4¼c.	4¼c.	5½c.
38½-in., 64x60, 5.35	5½c.	5½c.	7½c.
39 -in., 68x72, 4.75	6½c.	6½–6¾c.	8½c.
39 -in., 72x76, 4.25	6⅞–7c.	6¾c.	9½c.
39 -in., 80x80, 4.00	7¼–8c.	7½–7¾c.	10¼c.
BROWN SHEETINGS			
36-in., 56x60, 4.00	6¾–6⅞c.	6¾c.	8½–8¾c.
36-in., 48x48, 3.00	7¼–7½c.	7½c.	10½c.
37-in., 48x48, 4.00	5¾– 6c.	5¾–6c.	8¾c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6¼–6¾c.	6¼–6¾c.	9½–9½c.
36½-in., 64x60, 5.75	5¼c.	5¼c.	7⅞–7¾c.
MISCELLANEOUS			
Drills, 37-in., 3 yd	7½c.	7½c.	11c.
Denims, 2.20	12½c.	12½c.	16.33c.
Tickings, 8 oz	16 c.	16 c.	20–21c.
Standard prints	7½c.	7½c.	9½c.
Eastern staple ginghams, 27-in.	8 c.	8 c.	10 c

Cotton Waste

Peeler comber	8½— 9½
Peeler strips	7½— 7½
Sak. comber	8 — 8½
Choice willowed fly	4½— 5½
Choice willowed picker	3 — 4½
Sak. strips	10 —10½
Linters (mill run)	2½— 3½
White spooler (single)	8 — 8½

Cotton Yarn

CARDED (Average Quality)
Double Carded 2c.-4c. higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.20	22s	$0.22½– .23
10s	– .20½	24s	.24½– .25
12s	.20½– .21	26s	.25½– .26
14s	.21 – .21½	30s	.26½– .27
20s	.21½ – .22	40s ex.qual.	– .39

TWO-PLY SKEINS AND TUBES

8s-2	$0.20½	26s-2	$0.25½
10s-2	.20½– .21	30s-2	.26½– .27
12s-2	.21 – .21½	36s-2	.33 – .34
14s-2	– .21½	40s-2	.35 – .36
16s-2	.21½– .22	40s-2 hi. blk.	.39 – .40
20s-2	– .22	50s-2	.44 – .45
24s-2	– .24½	60s-2	.53 – .54

SINGLE WARP

10s	$0.20	24s	$0.24½
12s	– .20½	26s	– .25½
14s	– .21	30s	.27 – .27½
16s	– .21½	40s ex. qual.	.39 – .40
20s	– .22		

TWO-PLY WARPS

8s-2	$0.20½– .21	24s-2	$0.24½– .25
10s-2	.21	26s-2	.25½– .26
12s-2	.21½	30s-2	.27 – .27½
14s-2	.21½– .22	40s-2 ordin.	– .36
16s-2	– .22	50s-2	– .45
20s-2	.22 – .22½	60s-2	– .54

8s-3 and 4-ply skeins and tubes; tinged, 17; white, 19; waste 16½

HOSIERY CONES (Frame Spun)

8s	$0.20	22s	$0.23½– .24
10s	$0.20 – .20½	24s	.24½– .25
12s	.20½ – .21	26s	.25½– .26
14s	.21 – .21½	30s tying	– .27
16s	.21½– .22	30s reg	– .29
18s	.22 – .22½	30s ex. qual.	.30 – .30½
20s	.22½– .23	40s	.36 – .37

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

29s-2	$0.35 – .35½	60s-2	$0.55 – .56
30s-2	.40 – .41	70s-2	.65 – .66
36s-2	.41 – .42	80s-2	.77 – .78
40s-2	.43 – .44	90s-2	.92 – .95
50s-2	.48 – .48½	100-s	1.15 –1.18

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.36 – .37	60s-2	$0.56 – .57
30s-2	.41 – .42	70s-2	.66 – .67
36s-2	.42 – .43	80s-2	.77½– .78
40s-2	.44 – .45	90s-2	.97 –1.00
50s-2	.49 – .50	100s-2	1.20 –1.25

SINGLES

12s	$0.29	30s	$0.38½
14s	–.29½	38s	– .41½
16s	–.30	40s	– .42½
18s	–.30½	50s	– .47½
20s	–.31½	60s	54 – .54½
24s	–.34	70s	– .65
28s	–.37	80s	76 – .77

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.52 – .53	90s-2	$1.31 –1.33
30s-2	.54 – .55	100s-2	1.61 –1.63
36s-2	.57 – .58	120s-2	2.01 –2.04
40s-2	.60 – .61	30s	.65 – .67
45s-2	.62 – .64	40s	.70 – .72
50s-2	.64 – .66	50s	.77 – .79
60s-2	.72 – .74	60s	.85 – .87
70s-2	.84 – .86	70s	.97 – .99
80s-2	.96 –1.01	80s	1.19 –1.21

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed Oct. 16	For Week High	For Week Low	Closed Oct. 22	Net Chge.
October	10 16	10 36	10 17	10 36	+.20
November	10 23	10 37	10 23	10 36	+ 13
December	10 32	10 55	10 30	10 55	+ 23
January	10 46	10 69	10 42	10 69	+ 23
February	10 57	10 80	10 55	10 80	+ 23
March	10 68	10 95	10 64	10 92	+ 24
April	10 79	11 05	10 76	11 05	+ 26
May	10 90	11 18	10 86	11 18	+ 28
June	10 99	11 27	10 96	11 27	+ 28
July	11 08	11 37	11 03	11 36	+ 28
August	11 08	11 46	11 06	11 46	+ 38
September		11 56	11 49	11 56	

SPOT FLUCTUATIONS FOR WEEK

(Middling)	New York	New Orleans	Liverpool
Friday, Oct. 17	10 20	10 10	5 73
Saturday, Oct. 18	10 25	10 10	5 75
Monday, Oct. 20	10 45	10 20	5 79
Tuesday, Oct. 21	10 50	10 25	5 84
Wednesday, Oct. 22	10 50	10 31	5 87
Thursday, Oct. 23	10 80	10 59	5.92

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Oct. 22		Change
November Sak	17 32	—0 20
December uppers	11 34	+0 02

Nov.-Dec. Shipment c. i. f. Boston.

(Tariff not included)	(Prices Nominal)
Fully good fair Sak	21 5
Fully good fair to good Uppers	14 50

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	21
Peruvian Pima No. 1	25½
Peruvian Moderate Rough	17½
Peruvian Full Rough	22½
China Tientsin No. 1	10¼
India Rough	9 to 11
India Smooth	8 to 11

(By Gerald G. Loeb, New York.)

BASIS MIDDLING

	Saturday, Oct. 18	Saturday, Oct. 11
10 markets average	9 60	9 76
Memphis	9.00	9 15

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in	11 00-11 30c.
1 3/16-in	12 75-13 00c.
1¼-in	18 00-18 30c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis Total	42,389	38,755	32,647
F.o.b. included in total	38,026	33,694	30,049
10 markets	229,269	241,084	330,804

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	49,074	73,841	51,103
Gross receipts	70,756	135,325	84,368
Total since Aug. 1, net	208,347	276,491	174,618
Shipments	39,794	85,674	50,749
Total since Aug. 1	185,829	318,019	226,765
Total stock	274,959	253,833	166,057
Increase for week	30,962	49,657	33,619
Unsold stock in hands of Memphis factors	59,543	65,847	
Increase for week	5,535	22,639	

AVERAGE PRICE OCT.-NOV. SHIPMENT
HARD WESTERN COTTON
F. o. b. New England

	Middling	St. Middling
1 5/16 in	12½–12¾c.	12¾–13c.
1⅛ in	13½–13¾c.	13½–14c.
1 3/16 in	15½–16c.	16½–17c.
1¼ in	19 –21c.	20 –22c.

Basis on New York, New December 10.55c.

SPOT FLUCTUATIONS AND STOCKS

Markets	Middling Oct. 15	Middling Oct. 22	Stocks Sales	Stocks This Week	Stocks Last Year
Galveston	10.30	10 40	4,766	483,558	447,156
New Orleans	10 23	10 31	50,557	534,171	360,295
Mobile	9 65	9 70	21,247	91,332	58,729
Savannah	9 88	9 96	6,831	253,822	93,767
Norfolk	10 06	10 19	2,706	75,667	27,930
New York	10.40	10 50	700	230,159	100,707
Augusta	9 75	9 81	3,373	125,953	84,328
Memphis	9 15	9 20	38,357	302,626	278,976
St. Louis	9 40	9 50		2,003	2,506
Houston	10 20	10 25	52,999	1,270,154	839,791
Dallas	9 65	9 70	72,990	18,224	5,785

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F	.75†	1.00†	.85†	.75†	0.88†
S. G. M	.60†	.75†	.75†	.63†	.70†
G. M	.50†	.50†	.60†	.50†	.51†
S. M	.35†	.25†	.35†	.25†	.30†
S. L. M	.75*	.75*	.65*	.50*	.68*
L. M	1.50*	1.75*	1.50*	2.25*	1.70*
S. G. O.**	2.50*	2.75*	2.50*	3.50*	2.83*
G. O	3.50*	4.00*	3.50*	4.50*	3.85*

YELLOW TINGED

G. M	0.50*	0.75*	0.50*	0.50*	0.58*
S. M	1.00*	1.25*	1.00*	1.00*	1.05*
M.**	1.75*	2.00*	1.50*	1.50*	1.68*
S. L. M	2.50*	2.75*	2.25*	2.25*	2.37*
L. M.**	3.50*	4.00*	3.00*	3.00*	3.30*

YELLOW STAINED

G. M	1.50*	1.75*	1.50*	1.50*	1.58*
S. M.**	2.25*	2.50*	2.50*	2.50*	2.40*
M.**	3.00*	3.25*	3.50*	3.50*	3.23*

BLUE STAINED

G. M.**	1.75*	2.00*	1.75*	1.75*	1.75*
S. M.**	2.25*	2.75*	2.75*	2.75*	2.48*
M.**	3.00*	3.25*	3.75*	3.75*	3.25*

**Grades not deliverable on contract. †On Middling *Off Middling.

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne..	$0.30 –$0.31	¾ blood....	$0.29 –$0.30
Fine clthg ..	.23 – .24	¼ blood.....	.29 – .30
⅜ blood.....	.29 – .30		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months'..	$0.73 –$0.75		
California, Northern	.65 – .68		

PULLED—EASTERN (CLEAN BASIS)

AA.....	$0.75 –$0.78	B-Super...	$0.50 –$0.60
A-Super....	.65 – .68	C-Super...	.48 – .52

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.73 –$0.75
Staple ¾ bld	.70 – .72
Fine and fine medium	.68 – .72
¾ blood	.58 – .62
½ blood	.56 – .58

MOHAIR—DOMESTIC

Best Carding	$0.35 –$0.38
Best combing	.50 – .52

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.25 –$0.28
Cape firsts	.25 – .28

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.62 –$0.65
64s	.48 – .50
58s-60s	.40 – .42

(IN GREASE)

Montevideo:	
58s-60s	$0.23 –$0.24
56s	.22 – .23
50s	.20 – .21
Buenos Aires:	
4s, 40-44s	$0.20 –$0.21
5s, 36-40s	.18 – .19

FOREIGN CARPET (GREASE BASIS IN BOND) SCOURED

Aleppo	$0.28 –$0.29
China: Combing No. 1	.16 – .17
China Filling Fleece	.15 – .16
Szechuen ass't	.15
Cordova	.15 – .16
Scotch black face	.19 – .20
East India: Kandahar	.23 – .24
Vican'r	.27 – .28
Joria	.27 – .29

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.87½ – .90
2-24s 40s	.97½ – 1.00
2-26s 44s	1.07½ – 1.10
2-28s 46s	1.10 – 1.12½
2-30s 48s	1.15 – 1.17½
2-32s 50s	1.20 – 1.25

(Single yarns 5c. less than above)

2-36s, 58s	$1.32½ – 1.35
2-40s, 60s	1.40 – 1.45
2-40s, 64s	1.45 – 1.50
2-50s, 66s	1.65 – 1.70
2-60s, 70s	2.00 – 2.05

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.92½
2-20s, 48s in oil	97½ – 1.00
2-20s, 50s in oil	1.02½
2-20s, 56s in oil	1.12½
2-20s, 60s in oil	1.27½ – 1.32½
2-20s, 64s in oil	1.35 – 1.37½
1-15s, 46s dyed	1.10
1-15s, 48s dyed	1.12½
1-15s, 50s dyed	1.15

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.17½ – $1.20
1-20s, 60s	1.25 – 1.27½
1-18s, 64s, Dyed	1.50 – 1.52½
1-26s, 64s	1.27½ – 1.30
1-30s, 60s, Warp	1.37½ – 1.40
1-30s, 64s, Warp	1.42½ – 1.45
2-30s, 64s, Fancy mixes	1.70 – 1.72½
2-40s, 64s, Zephyrs	1.55 – 1.60
1-50s, 66s	1.62½ – 1.65
2-50s, 66s	1.80 – 1.82½
1-60s, 70s	1.95 – 2.00
2-60s, 70s	2.10 – 2.15

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.05 –$1.07½
1-40s, 50-50-60s on cops	1.20 – 1.25
1-40s, 50-50-64s on cops	1.22½ – 1.25
1-40s, 50-50-64s Australian cops	1.25 – 1.30

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.98–$1.00
Half-blood (60-62s)	.88– .92
High ¾ blood (58s)	.83– .85
Aver. ¾ blood (56s)	.80– .83
Low ¾ blood	.73– .78
High ½ blood (50s)	.70– .72
46s S. A. and N. Z	.65– .66
44s S. A. and N. Z	.62– .65
40s S. A. and N. Z	.58– .60

TOPS—BRADFORD, ENG. (OCT. 16)

Fine (70s)	29 d	¾ bld. (56s)	17 d
Fine (64s)	25 d	½ bld. (50s)	15 d
¾ bld. (60s)	23½d	Cross-bred (46s)	12½d
⅝ bld. low (58s)	20 d		

NOILS—BOSTON

Fine	$0.52–$0.55	High ½ bld..	$0.42–$0.45
Half-bld	.48– .52	Low noils	.35– .38
Aver. ¾ bld.	.45– .48	Medium colored	.35– .37
Fine colored	.43– .45		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.73 –$0.75
Lap, fine colored	.56 – .58
Hard ends, fine white	.60 – .62
Hard ends, ¼ blood white	.38 – .42
Hard ends, fine colored	.25 – .28
Hard ends, medium colored	.20 – .22
Card, fine white	.30 – .32
Burr, fine Carbonizing	.38 – .40

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.06 –$0.07
Merinos, Fine Dark	.04½ – .05
Merinos, Fine Light	.14 – .14½
Serges, Blue	.06½ – .07
Serges, Black	.07 – .07½
Serges, Red	.10½ – .11
Knit, White	.27 – .28
Knit, red	.15 – .16
Knit, Light Hoods	.14 – .15
Worsted, Light	.05½ – .06
Worsted, Blue	.07½ – .08
Worsted, Black	.07½ – .08

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. spec. gd. XX. sk. 85%	$4.00
Japan organzine, 2 thd. sp. crack. sk. 81%	3.65
Japan crepe, 3 thd. gd. XX bob. 83%	3.80
Japan crepe, 3 thd. sp. crack. bob. 81%	3.70
Japan crepe, 4 thd. crack bobbins, 78%	3.50
Japan grenadine, 4 thd. sp. grand singles, 88%	5.70
Japan grenadine 4 thd. 87%	5.20
Japan grenadine 3 thd. 90%	6.35
Canton crepe, 3 and 4 thd. ns. 14/16 on bobbins	2.55
Hosiery tram, 3 thd. Japan 90%	4.70
Hosiery tram, 5 thd. Japan, 85%	3.70
Hosiery tram, crack XX	3.45

SPUN SILK YARNS (Terms: net 30)

40/2	$3.35	60/2	$3.65
50/2	3.55	62/1	2.50

Raw Silk

(60 day basis)
Prices Nominal

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 86/88%	$3.20	$2.65	$2.75
Special Grand, 85%	2.90	2.65	2.75
Grand XX, 83%	2.75	2.55	2.65
Special Crack, 81%	2.65	2.45	2.55
Crack XX, 78%	2.55	2.40	2.40
Extra Extra, 73%	2.40	2.30	2.30
Best Extra, 68%	2.35	2.20	2.25

Canton filature, new style, 14/16	$1.85
Canton filature, new style, 20/22	1.75
Tussah filature, 8 cocoon	1.33

NATIONAL RAW SILK EXCHANGE

	Close Oct. 15	For the Week High	For the Week Low	Close Oct. 21	Net Chge.
October	2.30	2.40	2.20	2.40	+ .10
November	2.27	2.32	2.20	2.30	+ .03
December	2.25	2.30	2.17	2.25	...
January	2.25	2.30	2.17	2.21	— .04
February	2.25	2.28	2.17	2.21	— .04
March	2.25	2.29	2.17	2.21	— .04
April	2.24	2.29	2.18	2.21	— .03
May	2.25	2.28	2.17	2.21	— .04

Oct. 15 to Oct. 21—Total contracts, 5,970. Total number of bales, 597. Total approximate value, $14,358—Trading unit is Crack Double Extra 13-15 white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18	1.60	1.50
75	30	1.70	1.60
100	18	1.25	1.15
100	40	1.30	1.20
125	36–50	1.20	1.10
150	24–30	.95	.90
150	36–40	1.00	.95
150	60	1.15	1.10
150	75–90	1.20	1.15
170	24–27	.95	.90
170	60	1.15	1.10
200	30	.90	.85
200	35–40	.90	.85
200	75–80	1.10	1.05
300	44–60	.78	.75
450	54–60	.78	.75
600	72–96	.78	.75
900	100–144	.78	.75

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.60	$1.50	150	$0.95	$0.90
100	1.25	1.15	175	.95	.90
125	1.20	1.10			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	65	45	$2.00
25	24	2.85	80	60	1.70
30	24	2.60	100	75	1.40
40	30	2.40	120	90	1.30
52	30	2.20	150	112	1.25
			180	135	1.10

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.25 2.75	120	$1.90
55	2.05–2.55	140	1.30
65	2.45	150	1.40–1.85
75	1.80–2.70	200	1.55
100	1.65–2.45	300	1.50

Rayon Waste

Prices Nominal

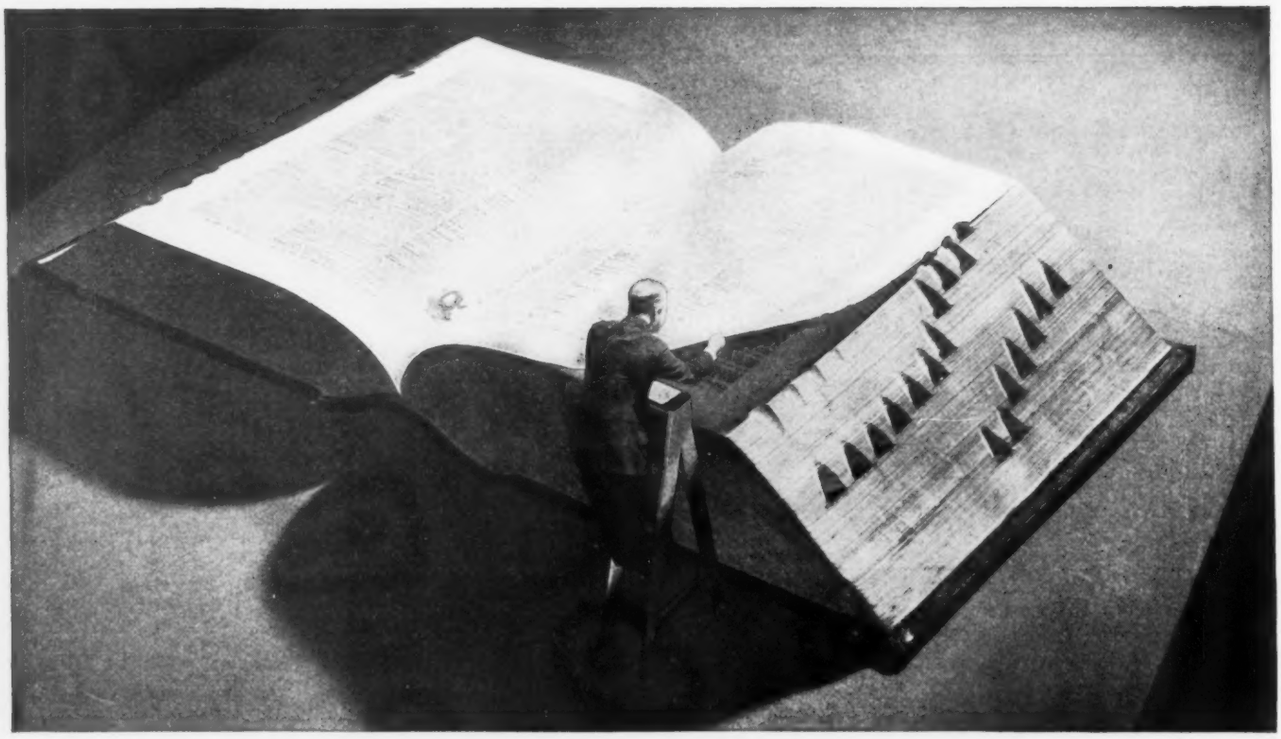
Open bleached waste	–$0.15
Open unbleached waste	...– .13
Bleached thread waste (mfs.)	...– .11
Bleached thread waste (misc.)	...– .09
Colored thread waste	...– .08
Colored clips	...– .07

CONVERTED RAYON WASTE

Bleached tops	–$0.35
Unbleached tops	...– .33
Bleached noils	...– .15
Bleached garnetts	...– .20
Unbleached garnetts	...– .16
Colored garnetts	...– .14

Silk Waste

Kibizzo Kakai Grand XX	$0.54
Kibizzo Kakai Triple Extra	.48
Frison Grand Double	.52½
Pierced Cocoons	.53



Let's take a look at this word
"OBSOLESCENCE"

Contrary to the dictionary, obsolescence is a *disease*. It affects all things mechanical in the same manner that various ailments disable those who have outlived their years of usefulness.

For us humans there is as yet no cure for obsolescence—we cannot replace old bones with new nor exchange a tottering gait for the proud stride of youth. Industry is more fortunate. It can keep itself young—in fact it cannot afford to grow old. Machines and methods too old for the pace of modern times must be discarded, scrapped, to make way for the improvements that keep plants young, productive and profitable.

In the Full-Fashioned Hosiery field much has been accomplished in the past five years to make a better product — faster and cheaper than ever thought possible. Mills that have kept abreast of these developments are enjoying profitable operation. Others, as you know, are experiencing difficulties.

Let us discuss these new developments with you now and explain how your equipment can be systematically modernized without a "major operation" on the treasury.

TEXTILE MACHINE WORKS
READING, PA.

The "READING"
Full-Fashioned Knitting Machine

Southern Mill Securities

(A. M. Law & Co., Spartanburg)

	Bid	Asked
Abbeville Cotton Mills	..	50
Anderson Cotton Mills	60	65
Arcade Cotton Mills	..	55
Arcadia Mills	..	200
Arcadia Mills, pfd	90	93
Arkwright Mills	..	50
Augusta Factory, Ga	..	20
Avondale Mills, Ala	750	1000
Beaumont Mfg. Co	200	250
Beaumont Mfg. Co. 7% pfd	100	102
Belton Mills	..	20
Belton Mills, pfd	..	60
Bibb Mfg. Co	92	96
Bibb Mfg. Co. 6% pfd	98	102
Brandon Corp., A	..	45
Brandon Corp., B	..	6
Brandon Corp., pfd	..	80
Calhoun Mills	..	90
Chadwick-Hoskins Co. (par, $25)	7	10
Chesnee Mills	..	55
Chiquola Mfg. Co	..	240
Chiquola Mfg. Co., pfd	88	92
Clifton Mfg. Co	95	98
Clinton Cotton Mills	..	240
Columbus Mfg. Co., Ga	58	65
Cowpens Mills	..	30
D. E. Converse Co	89	93
Dallas Mfg. Co., Ala	..	50
Darlington Mfg. Co	40	50
Drayton Mills	80	..
Dunean Mills	99	108
Dunean Mills, pfd	94	98
Eagle & Phoenix Mills, Ga	..	65
Easley Cotton Mills, pfd	..	45
Enterprise Mfg. Co., Ga	..	100
Fairforest Finishing Co., serial notes	95	100
Florence Mills	45	50
Florence Mills, pfd	97	100
Gaffney Mfg. Co	..	21
Gainesville Cotton Mills, Ga	130	150
Glenwood Mills	85	95
Gluck Mills	65	70
Gossett Mills	..	55
Graniteville Mfg. Co	..	95
Greenwood Cotton Mills	400	..
Grendel Mills, pfd. (par, $50)	40	45
Hamrick Mills	..	90
Hartsville Cotton Mills	130	140
Hunter Mfg. & Com. Co., pfd	78	82
Industrial Cotton Mills Co., pfd	..	30
Inman Mills	110	120
Inman Mills, pfd	99	102
Judson Mills, A, pfd	96	99
Judson Mills, B, pfd	94	98
King, John P. Mfg. Co., Ga	80	90
Lancaster Cotton Mills	225	..
Laurens Cotton Mills	..	110
Limestone Cotton Mills	..	95
Lydia Cotton Mills, serial notes	95	100
Marion Mfg. Co., N.C.	..	105
Marlboro Mills	..	15
Mills Mill, pfd	88	92
Mollohon Mfg. Co., pfd	95	100
Monarch Mills	95	100
Musgrove Cotton Mills	..	25
Newberry Cotton Mills	95	100
Ninety-six Mills	400	..
Norris Cotton Mills	..	40
Orr Cotton Mills	..	55
Orr Cotton Mills, pfd	..	80
Pacolet Mfg. Co	..	110
Pacolet Mfg. Co., pfd	89	92
Panola Cotton Mills, Class A, pfd. (par, $60)	55	60
Pickens Cotton Mills	105	115
Piedmont Mfg. Co	95	100
Piedmont Print Works (no par)	..	10
Piedmont Print Works, pfd	..	65
Poe, F. W. Mfg. Co	17	20
Riverside & Dan River Mills	9	11
Riverside & Dan River Mills, 6% pfd.	60	65
Saxon Mills	..	60
Sibley Mfg. Co., Ga	50	60
Southern Bleachery	..	20
Southern Bleachery, pfd	..	80
Southern Bleachery, serial notes	95	100
Southern Franklin Process	18	22
Southern Franklin Process, pfd	97	101
Southern Worsted Corp., pfd	85	90
Spartan Mills	..	130
Spencer Corp., serial notes	95	100
Union-Buffalo Mills	..	35
Union-Biffalo Mills, 1st pfd	80	82
Union-Buffalo Mills, 2nd pfd	..	40
Victor-Monaghan Co	53	56
Victor-Monaghan Co., pfd	105	110
Wallace Mfg. Co	..	100
Ware Shoals Mfg. Co	120	135
Whitney Mfg. Co	..	25
Woodside Cotton Mills Co	..	35
Woodside Cotton Mills Co., pfd	..	40
Yarns Corp. of America, gold bonds	96	100

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Oct. 22, 1930.

	High	Low	Last Sale	Net Change
Adams Millis	23½	21	21	— 2½
American Woolen	7⅞	7	7	—
American Woolen, pfd	21	18¾	19	— 2
*Assoc. Rayon, pfd	48	45	48	+ 2
Belding-Hemingway	3⅛	3	3	—
Botany Mills, A	2	2	2	—
Cannon Mills	20	19½	19½	—
Century Ribbon	3¾	3½	3½	—
Collins & Aikman	13½	12	12	— 1½
Consolidated Textile	⅞	⅝	⅝	+ ⅛
Duplan Silk	14⅜	14½	14½	— 1
Durham Hosiery, pfd	28	28	28	— 19½
*Fabrics Finishing	⅛	⅛	⅛	—
Gotham Hosiery	9	7⅞	7⅞	— 1⅛
Industrial Rayon	45	39¾	41	— 5⅜
Kayser, Julius	18½	17	17⅜	— 1
Kendall, pfd	54	50	54	+ 4
Mallinson	4⅞	4	4	— ⅛
Mohawk Carpet	15¼	14	15	— ⅛
Munsingwear	36	34½	36	+ 1
Pacific Mills	20	17	17⅜	— 1⅞
*Pepperell	86½	85½	85½	— 1
*Powdrell & Alexander	35	34⅝	34⅝	— ⅛
*Propper-McCallum	6	6	6	— ⅛
Real Silk Hosiery	40	37	37⅜	— 2⅛
*Tubize Chat B	5	4⅜	4⅜	—
United Piece Dye Works	25½	23½	25½	+ ⅛
Van Raalte	8	8	8	+ 1

*Listed on Curb.

N. Carolina Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Asked
Acme Spinning Co	60	75
American Yarn & Processing Co	..	71
Chadwick-Hoskins Co. (Par $25)	7	10
Chadwick-Hoskins Co., 8%, pfd	90	96
China Grove Cotton Mills	80	92
Climax Spinning Co	52	65
Clover Mills	..	25
Converse, D. E. Co	80	91
Crescent Spinning Co	50	61
Dixon Mills	90	100
Durham Hosiery, 6%, pfd	..	33
Eagle Yarn Mills	52	65
Efird Mfg. Co	60	80
Erwin Cotton Mills	..	114
Erwin Cotton Mills Co., 6%, pfd	80	95
Flint Mfg. Co	..	85
Flint Mfg. Co., 7%, pfd	90	97
Globe Yarn Mills (N. C.)	..	16
Gray Mfg. Co	..	75
Hanes, P. H. Knitting Co	7	10
Hanes, P. H. Knitting Co., 7%, pfd	..	98
Henrietta Mills, 7%, pfd	40	55
Imperial Yarn Mills	..	60
Linford Mills	61	71
Locke Cotton Mills Co	40	55
Majestic Mfg. Co	100	120
Mansfield Mills	..	65
Mooresville Cotton Mills	..	6
Mooresville Cotton Mills, 7%, prior	..	79
Myers Mills	..	56
Myrtle Mills	..	51
National Yarn Mill	50	60
Perfection Spinning Co	50	66
Ranlo Mfg. Co	..	111
Ranlo Mfg. Co., 7% p d	..	97
Roanoke Mills	..	60
Roanoke Mills, 1st pfd., 7½%	75	82
Roanoke Mills, 2nd pfd., 8%	75	80
Rosemary Mfg. Co., pfd., 7½%	95	..
Rowan Cotton Mills Co	62	74
Seminole Cotton Mills Co	..	75
Sterling Spinning Co	52	66
Stowe Spinning Co	54	62
Victory Yarn Mills Co	30	50
Ware Shoals Mfg. Co	105	125
Ware Shoals Mfg. Co., 7%, pfd	90	98
Winget Yarn Mills Co	33	50
Wiscassett Mills Co	155	180

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Public Sale	Bid	Asked
Am. Mfg. pfd	60	57	60
Amoskeag	7½	..	..
Arlington	22½	21	23
Associated Textile	36½	34	37
Bates	64	63	66
Berkshire, Associates, com	9	11	13
Berkshire Associates, pfd	72	65	68
Bigelow-Sanford, com	31	..	..
Boott Mills	120½	..	112
Edwards	80¼	63	66
Esmond, pfd	102	100	102
Farr Alpaca	70	68	71
Hamilton Woolen	40	35	38
Hill	18	14	18
Indian Orchard	20½	20	25
Ludlow	130	125	130
Merrimack, com	46¾	44	48
Nashua, com	12½	15	16
Nashua, pfd	66	57	62
Naumkeag	84	78	81
Newmarket	27	12	18
Otis	43	46	49
Pacific	18½	..	..
Pepperell	85½	85	88
Plymouth Cordage	70½	67	69
York	8¾	5¼	7

New Bedford Mill Stocks

(Sanford & Kelley, New Bedford)

	Bid	A ked
Acushnet Mill	6	....
Beacon Mfg., com	125	....
Beacon Mfg., pfd	85	87
Booth Mfg. Co., com	....	6
Booth Mfg. Co., pfd	25	28
Bristol Mfg. Co	35	40
City Mfg. Co	17½	19
Dartmouth Mfg. Co., com	..	41
Dartmouth Mfg. Co., pfd	78	....
Gosnold Mill, com	11	....
Gosnold Mill, pfd	39	41
Grinell Mfg. Co	27	31
Hathaway Mfg. Co	32½	....
Holmes Mfg. Co., com	1	3
Holmes Mfg. Co., pfd	8	11
Kilburn Mill	36	38½
Nashawena Mills	20	21½
N. B. Cotton Mills, pfd	10	12½
Neild Mill	35	37½
Nonquitt Mills	5½	5¾
Pierce Mill	100	....
Potomska Mills	34	36
Quissett Mills, com	52½	55
Soule Mill	52	....
Taber Mill	9½	10
Wamsutta Mills	10½	11¼
Gosnold Mill Notes	....	90
Whitman Mills, 6% Notes	....	27

Textile Calendar

United States Institute for Textile Research, First Annual Meeting, New York City, Nov. 6, 1930.

National Association of Woolen and Worsted Overseers, 47th Annual Meeting, American House, Boston, Mass., Nov. 15, 1930.

The Textile Forum, N.A.C.M., overseers of carding, Boston (Mass.) Chamber of Commerce, Nov. 18, 1930.

Ninth National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York City, Dec. 1 to 6, 1930.

The Textile Forum, N.A.C.M., overseers of spinning, Boston (Mass.) Chamber of Commerce, Dec. 9, 1930.

The Textile Forum, N.A.C.M., master mechanics, Boston (Mass.) Chamber of Commerce, Jan. 13, 1931.

The Textile Forum, N.A.C.M., warp preparation and weaving, Boston (Mass.) Chamber of Commerce, Feb. 10, 1931.

The Textile Forum, N.A.C.M., overseers of finishing, Boston (Mass.) Chamber of Commerce, March 10, 1931.

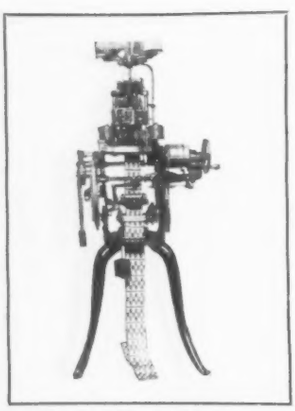
Knitting Arts Exhibition, Commercial Museum, Philadelphia, April 13 to 17, 1931.

Exposition of Chemical Industries, Grand Central Palace, New York, May 4 to 9, 1931.

A BRINTON Knitting Machine Will Do It

Don't let the Knitting Machine problem hold you up when you are contemplating making a different type of merchandise. Brinton makes Knitting Machines of all kinds—for every purpose from the smallest diameter to the largest. You can get into production immediately, without loss of time by calling in the Brinton representative.

If the precise style of machine you require isn't standard with Brinton—Brinton will make the machine you want for you.



Trick Wheel Ribber

Ribbers—of every type.

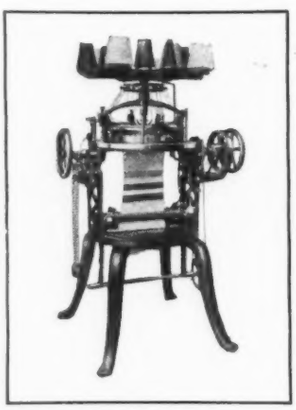
Jersey Machines—Plain and Fancy stitches.

Rib body machines for underwear and bathing suits.

Sweater machines—Rib and Jersey Types.

Special Knitting Machines from ¼″ to 36″.

H. BRINTON COMPANY
3700 Kensington Avenue, Philadelphia



Scarf Machine

BRINTON

CIRCULAR KNITTING MACHINES

of EVERY Kind for EVERY Purpose

Piedmont Chemists Meet in Charlotte

SIGNS of a definite upswing in textile conditions were pointed out in an address by Robert Lassiter, one of the leading southern mill executives, before approximately 200 members and visitors at the annual meeting of the Piedmont Section of the American Association of Textile Chemists and Colorists, in Charlotte, N. C., Oct. 19. The meeting was presided over by R. M. Mitchell, of Proximity Mfg. Co., Greensboro, N. C., chairman of the section.

In discussing business conditions in the textile industry, Mr. Lassiter, who is president of the Mooresville (N. C.) Cotton Mills, touched on the vital causes of the current general economic depression that was said to be in its last stages. The speaker stated that executives in all American industries are striving to provide employment for displaced workers in order that a greater number of people may earn a decent living.

An interesting paper on "Dyeing of Sulphur Colors" was presented by E. P. Davidson, of E. I. DuPont de Nemours Co., Charlotte, N. C. Raw stock, yarn and cotton piece goods dyeing were considered in the paper which covered the following subjects: Various methods of applying sulphur colors to cotton and other vegetables fibers; properties of certain classes, and individual colors, that influence the method of application and the results obtained.

Another technical paper on "Dyeing and Fnishing of Hosiery" was on the program but was omitted because of the serious illness of its author, Robert Robertson, hosiery technician, National Aniline & Chemical Co., New York, N. Y.

New officers for the section were elected, as follows: Samuel L. Hayes, resident manager, Hartsville (S. C.) Print & Dye Works, chairman; John L. Crist, of Charlotte, vice-chairman; George P. Feindel, of Union Bleachery, Greenville, S. C., treasurer. Arthur R. Thompson, Jr., of Rohm & Haas, Inc., Charlotte, was re-elected secretary. It was decided to hold the next meeting at Greensboro, N. C., the second or third week in January.

Planning Chemical Exposition for Next May in New York

Plans for the 13th Exposition of Chemical Industries, which will be held at the Grand Central Palace, New York, during the week of May 4, 1931, are in progress and rapidly taking shape. During the summer preparatory work has been done in connection with the students' course of lectures and plans are now being laid for it. The students course of lectures will this year again be under the chairmanship of Prof. W. T. Read, Dean of Chemistry at Rutgers University.

Already there are about 300 exhibitors who have reserved space for the exposition, so that even at this early date prospects for an excellent exposition are very good.

The Advisory Committee of the Exposition includes Dr. Arthur D. Little, chairman, Raymond F. Bacon, L. H. Baekeland, J. V. N. Dorr, Lammot du Pont, Henry B. Faber, Moses Gomberg, Williams Haynes, Charles H. Herty, H. E. Howe, Louis Kahlenberg, Sidney Kirkpatrick, Fred W. Payne, W. T. Read, Charles F. Roth, L. V. Redman, H. J. Schnell, R. Gordon Walker, A. H. White, David Wesson, M. C. Whitaker, T. B. Wagner and Victor Williams.

J. L. Ivers to Be Direct Representative of Toulson in New York

J. Lawrence Ivers has accepted the position of direct mill representative in the New York territory for Toulson Yarns, Inc., Bridgeport, Conn. Mr. Ivers was engaged for many years in manufacturing yarns and fabrics in the mills of New England after graduating from the New Bedford and Fall River Textile Schools. He was a divisional superintendent at the Renfrew Mfg. Co., for several years until the plant was liquidated. The New York office of Toulson Yarns, Inc., is located in the Textile Building at 295 Fifth Ave.

Glanzstoff to Handle All AKU Imported Yarn

Announcement has been made that effective at once, American Glanzstoff Corp. will handle the sales of both the Enka brand and Glanzstoff imported yarns of the Algemeene Kunstzijde Unie.

The announcement made by Algemeene Kunstzijde Unie, known as AKU, is to the effect that it has been decided as the best and most economical means of distribution in the United States, that all of its products be handled and sold exclusively through the sales offices of American Glanzstoff Corp. This includes products from the German plants as well as the Netherlands plants, known and sold to the trade as Glanzstoff rayon yarns and Enka rayon yarns, respectively. The imported Enka varns hitherto had been so'd here directly through the American office of AKU.

Outerwear Agents Favor Chicago Spring Opening

The Knitted Outerwear Selling Agents Association, through Herman Heller, president, has issued the following statement explaining its position with regard to the opening of 1931 spring and fall lines of sweaters and knit goods for the wholesale trade:

"At a meeting held Oct. 15 at the Arkwright Club, New York, of the association, the opening of sweater lines for spring and fall of 1931 was discussed. The majority of selling agents and manufacturers present who were opposed to a November opening of fall lines stated that the lateness of cold weather thus far in 1930 has not given wholesalers sufficient time to dispose of stocks bought for this season, and that to open 1931 fall lines in November would seriously interfere with normal distribution during the last two months of 1930. In addition, the current economic conditions of the country and the uncertain credit situation for 1931 were considered detrimental to an opening of fall lines before Jan. 1, 1931. After discussion, the following resolution was adopted: Resolved, that no manufacturer or selling agent show, solicit or quote prices on fall delivery merchandise until after Jan. 1, 1931.

"With regard to spring 1931 lines of sweaters, the following resolution was adopted: Resolved, that the association officially announce the opening of spring 1931 lines in the Great Northern Hotel, Chicago, during the week of Nov. 17, and advertise this event to the trade.

"It was stated at the meeting that letters had been received from wholesalers in different parts of the country, recommending a January opening for fall lines.

"In addition, word was received that a great many members of the National Knitted Outerwear Association, which organization adopted a resolution in favor of a November opening at its annual convention in Toronto earlier this year, were now insisting that the event be deferred until January."

•

Ellery B. Gordon, executive secretary of the National Knitted Outerwear Association, said that sentiment among the members of that organization continued to support the stand expressed in a resolution adopted at the Toronto convention, which favored November for openings but disapproved of collective showings.

New D-13 Specifications

(Continued from page 55)

the Scientific Apparatus Makers of America in accordance with the vote of D-13 last June.

A rising vote of silence was given in memory of the recent death of William Lee Hartshorne, first chairman of D-13. The minute of the previous meeting were approved and the presentation of papers followed.

Professor G. Haven, department of advanced machine design and in charge of textile research, M.I.T., spoke on "Future Textile Laboratory Practice." Professor Haven outlined the fields in which future study of the physical properties of textiles would be beneficial and showed by means of lantern slides some of the work which his department had done in developing new testing machinery.

Professor E. R. Schwartz, department of textile technology, M.I.T., read a paper on "The Newer Developments in Textile Microscopy." He emphasized the progress which had been made in developing instruments which were particularly suitable to textile work and

illustrated the various types. Of particular interest were colored slides illustrating his work with polarized light to replace straining in the examination of fibers. Many possibilities in the application of this method were apparent.

Dr. Dreyfus Forecasts Lower Celanese Prices and Patent Protection

Several striking points with regard to future policies of British Celanese, Ltd., and its American subsidiary, The Celanese Corp. of America, were enunciated by Dr. Henry Dreyfus, chairman and managing director of the British company, in his address at the eleventh general meeting which was held in London, Oct. 15. With regard to prices, Dr. Dreyfus said that the company planned to reduce rates gradually until they would be below the prices of viscose yarn. He also stated that the company was taking steps to protect Celanese patents from infringement.

Referring to prices, he said:

"We want to make it known to whomsoever it may concern, manufacturers, wholesalers, retailers and the consuming public at large, that we will gradually bring the prices down to such an extent that your superior products will in practically all cases not only be as cheap as, but cheaper than, viscose as they, for the most part, are already and, in fact, than any other artificial silk products on a permanent economic basis in this country. Further, our products will be able to enter successfully into very large markets where artificial silk has never entered before."

Mercerized Yarn Exports

A report of the Bureau of Foreign and Domestic Commerce for the month of August, 1930 shows that 593,129 lb., of mercerized yarn, worth $475,422 was shipped abroad that month by American processors. This is a rate of more than 7,000,000 lb. a year and if continued would do much to offset quiet home demand for these yarns during recent months. Argentina was best customer in August followed by Canada and third place was taken by Australia, these three countries taking more than half the entire export.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Oct. 18, based upon data compiled by the Market News Service of the Bureau of Agricultural Economics, Department of Agriculture, are as follows:

	Week Ended Oct. 18	Total to Date 1930	Total to Date 1929
Domestic	7,649,000	333,108,000	191,046,000
Foreign	167,000	54,614,000	84,435,000
Total	7,816,000	387,722,000	275,481,000
IMPORTS AT PRINCIPAL PORTS			
Boston	167,000	54,614,000	84,435,000
Philadelphia	1,421,000	38,688,000	71,292,000
New York	582,000	36,270,000	62,153,000
Total	2,170,000	129,572,000	217,880,000

Mitchell Heads Philadelphia Association

Allen R. Mitchell, Jr., of Allen R. Mitchell & Son, was elected head of the Philadelphia Textile Manufacturers' Association at a meeting held at Manufacturers' Club, Oct. 23.

Mr. Mitchell assumes the office vacated by Col. Millard D. Brown of Continental Mills, Inc., elected following the death early this year of Charles J. Webb, who had long been president of the organization.

He has been one of the outstanding leaders of the wool and worsted industry during recent years, especially since efforts were begun to establish some form of cooperative effort in this trade.

Arrangements for the meeting and dinner were in charge of C. Marlin Bell, managing director. Reports indicated that the organization is expanding in numbers and influence, under Mr. Bell's guidance. Speaker was Judge Harold B. Wells, lecturer.

Other officers elected were: John E. Fite, Jr., Krout & Fite Mfg. Co., 1st vice-president; John Oughton, Windsor Mfg. Co., was elected 2nd vice-president; Joseph W. Randall, Jr., J. Randall & Bro., Inc., secretary; J. Harold Felton, Valkone Dye & Finishing Works, treasurer.

Rayon Imports in September

The Bureau of Foreign and Domestic Commerce reports as follows on the import of rayon yarns, threads, waste, staple fiber and filaments into the United States during September, 1930:

	Pounds	Dollars
Yarns and threads		
France	5,882	8,366
Austria	44	52
Germany	62,162	49,350
Italy	4,482	2,883
Netherlands	7,700	6,254
United Kingdom	4,491	6,484
	84,761	73,389
Spun yarns		
Switzerland	5,071	2,738
Filaments		
United Kingdom	10,272	12,209
Waste		
Germany	65,486	5,918
Canada	3,523	331
	69,009	6,249
Cut or staple fiber		
Germany	54,334	23,329

Wool Overseers to Meet in Boston, Nov. 15

The 47th annual meeting of the National Association of Woolen and Worsted Overseers will be held on Nov. 15, at the American House, Boston, Mass. J. H. Pickford, Webster, Mass., is the secretary.

Print Cloth Mills Support Night Work Elimination

Following the annual meeting of members of The Cotton-Textile Institute last week, the print cloth and narrow sheetings mills executives and selling agents in attendance held a special group meeting for the purpose of discussing the general recommendation that came out of the annual meeting, looking to the discontinuance of night employment of women and minors and also for an exchange of views regarding the current market situation. About 83,000 print cloth and narrow sheetings looms were represented in this group meeting.

It developed that among those present practically none is now running at night, and they indicated individually that they had no intention of resuming night operations under conditions now existing or prospective.

Details of Eastern Carolina Division of S.T.A. Will Appear in Next Issue

The Eastern Carolina division of the Southern Textile Association met at Durham, N. C., Oct. 17 in semi-annual session. The meeting was held in the auditorium at the Erwin Cotton Mills. Systems and processes of cleaning yarns and other matters were under discussion. Details will be given in the front pages of TEXTILE WORLD next week.

Demonstrate Uses of Cotton Before Road Congress

Varied uses of cotton in road building are demonstrated in an exhibit installed this week in the Washington Auditorium, Washington, D. C., according to C. K. Everett of the New Uses Section of The Cotton-Textile Institute.

This exhibit has been arranged for the International Exposition which is being held in connection with the Sixth International Road Congress under the auspices of the American Road Builders Association. It was installed by the Bureau of Agricultural Economics of the Department of Agriculture in cooperation with The Cotton-Textile Institute as part of the program of exhibits of cotton utilization by the New Uses Committee. It includes cotton fabrics used for "curing" concrete, traffic markers of cotton, and sample fabrics used in top soil road construction.

National Hosiery Association Sets New Rules on Returns

Resolutions aiming to strengthen the position of the hosiery manufacturer regarding returns were adopted Monday at the quarterly meeting of the Board of Directors of the National Association of Hosiery and Underwear Manufacturers held at Hotel McAlpin, New York.

The directors also adopted a resolution calling for each member of the board to report to the president whether it is desirable to adopt standards for full-fashioned silk hosiery, and if so, to state what those standards should be, for consideration at the next quarterly meeting in New York, Jan. 19.

Resolutions on returns were as follows:

"1. No mechandise will be accepted for credit or exchange unless returned to the mill within 10 days after it has been received.

"2. Broken size assortments, color assortments or broken packages will not be accepted.

"3. Refusal to accept merchandise re-

turned for any reason other than manufacturing defects.

"4. Any disputes or questions arising from contracts must be settled by arbitration according to the arbitration rules of the National Association of Hosiery and Underwear Manufacturers."

Three Hosiery Men Withdraw From Exchange Committee

Laurance Mayer, vice-president of Julius Kayser & Co., on Wednesday confirmed the report that he had resigned from the committee formed to organize a Full-Fashioned Hosiery Exchange. Two others, Ferdinand Thun, chairman of the committee and president of Berkshire Knitting Mills, and William Meyer, president of Apex Hosiery Co., also withdrew from the committee. Laurance Mayer said his withdrawal was prompted by the fact that he is going away on a business trip, and added that his company remains a subscriber to the plan for the Exchange. The withdrawals were announced at a meeting of the exchange committee held at the New York office of Berkshire Knitting Mills, Tuesday. The plans for the exchange are under direction of Julian Armstrong, of Chicago. It was announced that the committee, minus the three retiring members, will continue to function until a general committee is chosen by the subscribers as a whole.

Lamont Analyzes Retailer's Function in Distribution

Secretary of Commerce Robert P. Lamont contributes an article on the topic, "Methods of Distribution are Changing" to the October issue of the *Premier Rayon Review*, which is published by the Industrial Rayon Corp., Cleveland, O. Mr. Lamont stresses the important part played by the retailer in distribution. Other contributors are: Frank E. Belden, editor of the *Review*, Helen Bishop, fashion authority and James Chittick, consulting textile specialist. Rayon in decorative fabrics, research in the rayon industry, increasing use of rayon for linings, and the romantic growth of the rayon industry are among the subjects discussed.

Botany Spring Lines Opened

Botany Worsted Mills in their spring lines of dress goods, coatings and suitings, which have been opened have obtained many new effects through the use of novelty yarns and weaves, although many numbers are plain in tone. More attention than before has been given to color and pastel shades in sport wear, and bright colors in other lines attracted attention.

Included in the new lines are several white coatings which are being ordered for the winter resort trade. There are serge numbers to cater to larger demand for fabrics of this type and tweeds in white and ivory created interest. Light-weight worsted crepe lines are being offered at attractive prices, "Myra" being priced at $1.25 per yd.

Interesting shantung print which attracted attention at Cheney Brothers winter resort fabric opening in New York; a wide range of floral colored patterns was shown

Abercrombie Leaves Cheney

It was announced Wednesday that Ralph Abercrombie, sales executive for Cheney Brothers, had resigned, effective about Dec. 1. No successor has been chosen as yet. Mr. Abercrombie, who was in charge of all Cheney sales, said he had no definite plans for the future.

Obituary

Thomas A. Duffey

Thomas A. Duffey, one of the organizers of the Delaware Rayon Co. and the New Bedford Rayon Co. and vice-president of both companies, died Wednesday at his home in Brooklyn, N. Y. Mr. Duffey had been ill for several months. He was 53 years old and had been in the insurance business prior to entering the rayon industry. His insurance company was known as T. A. Duffey & Co. Mr. Duffey was one of the prime movers in the Delaware Rayon Co., which was organized in 1925. Again, in 1926, Mr. Duffey helped organize a rayon firm, the New Bedford Rayon Co. Mr. Duffey was responsible for much of the development of the companies and his conservative and sound judgment helped to placed them in favorable positions. Mr. Duffey is survived by his widow and a son.

Chandler G. Robbins

Chandler G. Robbins, former assistant superintendent of the Leeds branch of the Corticelli Silk Co., and connected with the company for 46 years until his retirement in 1928, died in Leeds, a suburb of Northampton, Mass., Oct. 14, at the age of 70.

William Teece

William Teece, for the last eight years chief engineer for the Lancaster Mills, Clinton, Mass., and an employee for 24 years, died at his home in that town on Oct. 13, after a long illness. He was 68 years old, a native of Shopshire, England and had lived in Clinton for 40 years.

Business News

Wm. Cooper Procter Heads Procter & Gamble Board

The board of directors of Procter & Gamble Co. at a meeting held on Oct. 14 elected Col. Wm. Cooper Procter, president, as chairman of the board, Col. Procter being succeeded as president by Richard R. Deupree, vice-president and general manager. The office of chairman of the board was authorized by the stockholders at a meeting held in July, 1929, but it remained unfilled until the appointment of Col. Procter. No successor to Mr. Deupree was named, and it is understood, that he will continue to serve as general manager for the present.

Col. Procter after being graduated from Princeton in 1883, started to work in the factory to study every phase of operation. He succeeded his father as president of Procter & Gamble upon the latter's death in 1907. Col. Procter was responsible for the Saturday afternoon holiday, without reduction in pay, and for a plan for dividing profits with employees. The profit-sharing system is a means by which the employees can accumulate a fund for old-age protection by acquisition of the company's common stock under favorable terms.

W. S. Stewart Cleveland Manager for Lincoln Electric

The Lincoln Electric Co., Cleveland, Ohio, manufacturers of "Stable-Arc" Welders and "Linc-Weld" Motors, announce the appointment of W. S. Stewart, formerly in charge of the Pacific Coast offices of that company, to district manager in charge of the Cleveland territory with offices at the factory, Coit Road and Kirby Avenue. Mr. Stewart is a graduate of Yale University, and has had wide practical experience in various branches of this company.

Link-Belt Improves Indianapolis Plant

Following completion of a new factory at Toronto and a new plant at San Francisco, Calif., the Link-Belt Co. now annouces that it has just closed a contract for a powdered coal system entailing expenditure of $125,000. This contract covers installation of a powdered coal system at the Indianapolis foundry, where chains for elevating and conveying are made. A building to house the system, and alterations in the plant, will be included in the improvements.

Machines for Weighing Silk

Two textile scales, one a rayon-weighing unit, No. X-51, capacity 50 lb., the other a silk unit, No. X-52, capacity 30 lb., were shown in the display of the International Business Machines Corp. at the National Business Show in Grand Central Palace, New York, this week.

General Engineering Works in New Plant

General Engineering Works, manufacturers of screw machine products, has moved into its new plant at 4701 West Division Street, Chicago.